

STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 146737

TO: Ben Sackey

Location: 5b31/5c18

Art Unit: 1626

Friday, March 11, 2005

Case Serial Number: 10/771926

From: Noble Jarrell

Location: Biotech-Chem Library

Rem 1B71

Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes	; .	
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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: C Art Unit: 16 26 Pho Mail Box and Bldg/Room Loca	ne Number 30-2-07 ation: REM 5 B 3 1	Examiner #: 7	3489 Date: 3/3 lber: 10/271, 926	-los-
If more than one search is ou	ا ليكالم			
Please provide a detailed statement of Include the elected species or structure utility of the invention. Define any ten known. Please attach a copy of the cov	the search topic, and descres, keywords, synonyms, a rms that may have a specia yer sheet, pertinent claims	ribe as specifically as pos cronyms, and registry nur il meaning. Give example and abstract.	************************* sible the subject matter to be s mbers, and combine with the c es or relevant citations, author	searched. concept or s, etc, if
Title of Invention: Protein	n-tigrosine of	100 16 460		
Title of Invention: Protein): Zhili Xin	et al.	hibitor's out was	16-6-4
Earliest Priority Filing Date: 2				
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earcher Location:	Structure (#)	Questel/Orbit		
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(FILE 'HOME' ENTERED AT 08:12:38 ON 11 MAR 2005)

FILE 'HCAPLUS' ENTERED AT 08:12:43 ON 11 MAR 2005 L1

1 US20040214870/PN

E US2003-447407/AP.PRN

L2 1 US2003-447407P/AP.PRN

L3 1 L1-2

FILE 'REGISTRY' ENTERED AT 08:13:32 ON 11 MAR 2005

FILE 'HCAPLUS' ENTERED AT 08:13:33 ON 11 MAR 2005

L4 TRA L3 1- RN : 97 TERMS

FILE 'REGISTRY' ENTERED AT 08:13:34 ON 11 MAR 2005 L5 97 SEA L4

FILE 'WPIX' ENTERED AT 08:13:36 ON 11 MAR 2005

1 US20040214870/PN L6

E US2003-447407/AP.PRN

L7 2 (US2003-447407 OR US2003-447407P)/AP.PRN

2 L6-7 L8

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FILE COVERS 1907 - 11 Mar 2005 VOL 142 ISS 11 FILE LAST UPDATED: 9 Mar 2005 (20050309/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all 13

- 13 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
- AN 2004:905629 HCAPLUS
- DN 141:379917
- Entered STN: 29 Oct 2004 ED
- Preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase ΤI (PTP1B) inhibitors.
- Xin, Zhili; Liu, Gang; Pei, Zhonghua; Szczepankiewicz, Bruce G.; Serby. IN Michael D.; Zhao, Hongyu
- PA USA
- SO U.S. Pat. Appl. Publ., 32 pp. CODEN: USXXCO
- DT Patent
- LA English
- IC ICM A61K031-433

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ICS A61K031-426: A61K031-4245: A61K031-421: A61K031-4196: A61K031-4172
    514362000: 514383000: 514381000: 514365000: 514374000: 514364000:
    514396000; 548136000; 548143000; 548202000
    28-6 (Heterocyclic Compounds (More Than One Hetero Atom))
    Section cross-reference(s): 1, 63
FAN.CNT 1
                                                                   DATE
    PATENT NO.
                                            APPLICATION NO.
                        KIND
                               DATE
                        ----
                                                                   20040204 <--
    US 2004214870
                         A1
                                20041028
                                            US 2004-771926
PRAI US 2003-447407P
                          Р
                                20030214 <--
CLASS
 PATENT NO.
                 CLASS PATENT FAMILY CLASSIFICATION CODES
 US 2004214870
                 ICM
                        A61K031-433
                        A61K031-426; A61K031-4245; A61K031-421; A61K031-4196;
                 ICS
                        A61K031-4172
                 NCL
                        514362000: 514383000: 514381000: 514365000: 514374000:
                        514364000; 514396000; 548136000; 548143000; 548202000
US 2004214870
                ECLA
                        C07D261/18: C07D413/04+261+209C: C07D413/12+261+211 <--
OS MARPAT 141:379917
    R1R2R3AB(R4)LCR5R6R7 [A = isoxazolyl, pyrazolyl, oxadiazolyl, triazolyl,
    isothiazolyl, imidazolyl, oxazolyl, tetrazolyl, thiadiazolyl; B, C = aryl,
    heterocyclyl; L = bond. GX1JX2K; G, J, K = bond. (substituted) alkyl.
    alkenyl, aryl, cycloalkyl; X1, X2 = bond, O, NRc, NRcCO, CO, NRcSO2; Rc =
    H. alkyl, aralkyl; R1 = alkyl, alkoxy, alkylsulfonyl,
    trifluoroalkylsulfonyl, alkylsulfonylaminoo, specified azolyl; R2-R7 =
    null, H. alkyl, alkylcarbonyl, alkoxy, alkoxyalkyl, aryl, arylcarbonyl,
    aralkyl, CO2H, halo, cyano, OH, hydroxylalkyl, NO2, trihaloalkyl, etc.;
    with provisos], were prepared Thus, Et 5-(tributylstannyl)isoxazole-3-
    carboxylate (preparation given), (E)-3-(3-iodophenyl)prop-2-en-1-ol (preparation
    given). tri-2-furylphosphine. tris(dibenzylideneacetone)dipalladium(0),
    and CuI were were stirred 30 min. in DMF to give Et 5-[3-[(1E)-3-
    hydroxyprop-1-enyl]phenyl]isoxazole-3-carboxylate. This was stirred with
    Me 2.6-dihydroxybenzoate, Ph3P, and di-Et azodicarboxylate in THF to give
    Et 5-[3-[(1E)-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-
    enyl]phenyl]isoxazole-3-carboxylate. The latter was stirred with 2N NaOH
     in THF/MeOH to give 5-[3-[(1E)-3-[3-hydroxy-2-
     (methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-carboxylic acid.
    This inhibited PTP1B with Kic = 5.7 .mu.M.
    arylisoxazolecarboxylate prepn protein tyrosine phosphatase inhibitor:
    isoxazolecarboxylate aryl prepn PTP1B inhibitor; inflammation cancer
    diabetes autoimmune disorder obesity treatment isoxazolecarboxylate prepn
ΙT
    Inflammation
        (chronic, treatment; preparation of arylisoxazolecarboxylates as
        protein-tyrosine phosphatase inhibitors)
ΙT
    Immune system
        (immune system agents; preparation of arylisoxazolecarboxylates as
        protein-tyrosine phosphatase inhibitors)
IT
    Diabetes mellitus
        (insulin-dependent, treatment; preparation of arylisoxazolecarboxylates as
        protein-tyrosine phosphatase inhibitors)
    Diabetes mellitus
        (non-insulin-dependent, treatment; preparation of arylisoxazolecarboxylates
        as protein-tyrosine phosphatase inhibitors)
    Anti-inflammatory agents
    Antidiabetic agents
    Antiobesity agents
    Antitumor agents
    Drug delivery systems
        (preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase
        inhibitors)
    Osteoporosis
        (treatment, antiosteoporotics; preparation of arylisoxazolecarboxylates as
```

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protein-tyrosine phosphatase inhibitors)
    Autoimmune disease
    Neoplasm
    Obesity
       (treatment: preparation of arylisoxazolecarboxylates as protein-tyrosine
       phosphatase inhibitors)
                   745078-73-3P
    745078-69-7P
                                  745078-78-8P
                                                 745078-82-4P
                                                                745078-86-8P
    745078-89-1P
                   745078-90-4P
                                  745078-92-6P
                                                 745078-93-7P
                                                                745078-94-8P
    745078-96-0P
                   745078-98-2P
                                  745079-00-9P
                                                 745079-02-1P
                                                                745079-03-2P
                                                 745079-10-1P
                                                                745079-12-3P
    745079-04-3P
                   745079-07-6P
                                  745079-09-8P
                   745079-18-9P
                                  745079-21-4P
    745079-13-4P
    RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use): BIOL (Biological study): PREP (Preparation): USES
     (Uses)
        (claimed compound; preparation of arylisoxazolecarboxylates as
       protein-tyrosine phosphatase inhibitors)
    50-99-7, Glucose, biological studies
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (impaired glucose tolerance, treatment; preparation of
       arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)
    300865-11-6. Protein tyrosine phosphatase-1B
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (inhibitors: preparation of arylisoxazolecarboxylates as protein-tyrosine
        phosphatase inhibitors)
    74-89-5. Methylamine, reactions 75-36-5. Acetyl chloride 452-82-4.
     4-Fluoro-3-iodotoluene 497-06-3, 3-Butene-1.2-diol 540-51-2.
    2-Bromoethanol 553-90-2, Dimethyl oxalate 598-32-3, 3-Buten-2-ol
     601-89-8. 2-Nitroresorcinol 616-25-1. 1-Penten-3-ol 626-01-7.
     3-Iodoaniline 696-41-3, 3-Iodobenzaldehyde 867-13-0. Triethyl
     phosphonoacetate 994-89-8. Tributylstannylacetylene 1007-15-4
    1664-54-6. 3-(3-Aminophenyl)propionic acid 2142-63-4.
    3'-Bromoacetophenone 2150-45-0, Methyl 2,6-dihydroxybenzoate
     3132-99-8. 3-Bromobenzaldehyde 10272-07-8 10365-98-7.
     3-Methoxyphenylboronic acid 14337-43-0. Ethyl chlorooximidoacetate
    14452-30-3, 3'-Iodoacetophenone 52415-29-9, 6-Bromoindole 54060-30-9.
     3-Ethynylphenylamine 58313-23-8, Ethyl 3-iodobenzoate 95037-48-2.
    1-Acetylpiperidine-4-carbonyl chloride hydrochloride 745079-28-1
    RL: RCT (Reactant): RACT (Reactant or reagent)
        (preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase
        inhibitors)
IT
    3147-50-0P
                 14367-96-5P
                               20950-56-5P, [1,1'-Biphenyl]-3,3',5-triol
                  30578-88-2P
                                                            68332-33-2P
     25245-27-6P
                                33580-34-6P
                                              68034-75-3P
     73164-56-4P
                  81069-39-8P
                                83968-02-9P
                                              93618-22-5P
                                                            119125-28-9P
                   141763-48-6P
                                  185619-66-3P
                                                 227609-88-3P
                                                                281204-55-5P
     126085-91-4P
                                                  745078-74-4P
                                                                745078-75-5P
     745078-70-0P
                   745078-71-1P
                                  745078-72-2P
     745078-76-6P
                   745078-79-9P
                                  745078-83-5P
                                                 745078-84-6P
                                                                745078-85-7P
                                                 745079-05-4P
     745078-91-5P
                   745078-95-9P
                                  745078-97-1P
                                                                745079-06-5P
                   745079-14-5P
                                   745079-15-6P
                                                  745079-16-7P
                                                                745079-17-8P
     745079-11-2P
                                                                745079-26-9P
     745079-19-0P
                   745079-22-5P
                                   745079-23-6P
                                                 745079-24-7P
     745079-27-0P
                   745079-29-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase
        inhibitors)
=> b wpix
FILE 'WPIX' ENTERED AT 08:14:46 ON 11 MAR 2005
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                                            <20050308/UP>
FILE LAST UPDATED:
                            8 MAR 2005
MOST RECENT DERWENT UPDATE:
                               200516
                                              <200516/DW>
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>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
    FOR DETAILS. <<<
=> d all 18 tot
    ANSWER 1 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
18
     2004-774832 [76] WPIX
DNC C2004-271262
     New carboxylic acid derivatives are protein tyrosine phosphatase-1B
     inhibitors useful for treating e.g. type I and II diabetes and impaired
     glucose tolerance.
DC
     LIU, G; PEI. Z; SERBY, M D; SZCZEPANKIEWICZ, B G; XIN. Z; ZHAO, H
IN
     (LIUG-I) LIU G: (PEIZ-I) PEI Z: (SERB-I) SERBY M D: (SZCZ-I)
     SZCZEPANKIEWICZ B G: (XINZ-I) XIN Z; (ZHAO-I) ZHAO H
CYC 1
    US 2004214870 A1 20041028 (200476)*
                                                32
                                                      A61K031-433
    US 2004214870 A1 Provisional US 2003-447407P 20030214. US
     2004-771926 20040204
PRAI US 2003-447407P
                          20030214: US 2004-771926
     20040204
     ICM A61K031-433
     ICS A61K031-4172: A61K031-4196: A61K031-421; A61K031-4245: A61K031-426
     US2004214870 A UPAB: 20041125
     NOVELTY - Carboxylic acid derivatives (I) and their salts and prodrugs are
          DETAILED DESCRIPTION - Carboxylic acid derivatives of formula (I) and
     their salts and prodrugs are new.
          A = 3-R1-4-R3-isoxazol-5-yl, 1-R2-3-R1-4-R3-1H-pyrazole-5-yl,
     3-R1-4-R3-isothiazol-5-yl, 3-R1-(1,2,4)oxadiazol-5-yl,
     1-R2-3-R1-(1,2,4)triazol-5-yl, 3-R1-(1,2,4)thiadiazol-5-yl.
     2-R1-4-R2-4-R3-4H-imidazol-5-yl, 4-R3-5-R1-4H-(1.2.4)triazol-3-yl,
     5-R1-(1,3,4)oxadiazol-2-yl, 3-methyl-5-R1-(1,3,4)thiadiazol-2-yl,
     4-R2-4-R3-5-R1-4H-pyrazol-3-yl, 1-R3-2-R1-4-R2-1H-imidazol-5-yl,
     2-R1-4-R2-oxazol-5-yl, 2-R1-4-R2-thiazol-5-yl, 5-R1-2H-tetrazol-2-yl.
     3-R1-5-R2-1H-(1.2.4)triazol-1-yl, 4-R1-5-R3-1H-(1.2.3)triazol-1-yl or
     2-R2-4-R1-5-R3-1H-imidazol-1-yl;
          B' and C' = aryl or heterocycle:
          R1 = alkyl, alkoxy, (trifluoro)alkyl-SO2, trifluoroalkyl-NH-,
     alkyl-SO2NH-, carboxy, cyano, HONH-carbonyl, RaONH-carbonyl, nitro.
     RaOC(0)-, HO3S-, H2NO2S-, RaNHO2S-, (HO)2(0)P-, (HO)2(0)PCH2-,
     (HO)2(O)PCHF-, (HO)2(O)PCF2-, 2H-tetrazol-5-yl, 3-hydroxyisoxazol-5-yl.
     5-hydroxyisoxazol-3-yl, 3-hydroxypyrazol-5-yl, 2.2-dioxo-3H-
     (1.2.3.5) oxathiadiazol-4-yl, 2.2-dioxo-3H-(1.2.3.4) oxathiadiazol-5-yl.
     3-hydroxy-(1,2,4)oxadiazol-5-yl, 3-hydroxy-(1,2,4)thiadiazol-5-yl.
      \hbox{$2$-hydroxy-(1.3.4)oxadiazol-5-yl. $2$-mercapto-(1.3.4)oxadiazol-5-yl. } \\
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2-hydroxy-(1,3,4)thiadiazol-5-yl, 3-hydroxy-1H-(1,2,4)triazol-5-yl.
    2-hydroxyoxazol-5-yl, 2-hydroxythiazol-5-yl, 2-oxo-1.3-dihydroimidazol-4-
    yl. 2.2-dioxo-3H-(1.2.3)oxathiazol-4-yl. 3-oxo-1.2-dihydro-(1.2.4)triazol-
    5-yl, 1-oxo-2.3-dihydro-(1.2.3.5)thiatriazol-4-yl, 2.4-dioxoimidazolidin-1-
    yl. 2.4-dioxothiazolidin-5-yl. 2.4-dioxooxazolidin-5-yl.
     2-hydroxyoxazol-4-yl, 2.2-dioxo-3H-(1.2,3.4)oxathiadiazol-5-yl.
    1.1-dioxo-2.3-dihydro-(1.2.3.5)thiatriazol-4-yl or 2.4-dioxoimidazolidin-5-
    yl:
          R2 - R7 = absent, H, alkyl, alkylcarbonyl, alkoxy, alkoxyalkyl.
     alkoxycarbonyl, aryl, arylcarbonyl, arylalkyl, carboxy, carboxyalkyl,
    cyano, cycloalkyl, cycloalkylalkyl, halo, haloalkyl, heterocycle.
    heterocyclecarbonyl, heterocyclealkyl, hydroxy, hydroxyalkyl, nitro.
     trihaloalkyl, RaRbN, RaRbN-alkyl, RaRbN-carbonyl, RaRbN-carbonylalkyl,
    RaRbNN-sulfonyl, RaRbNN-sulfonylalkyl;
          Ra and Rb = H. alkyl, alkoxycarbonyl, alkylcarbonyl, aryl, arylalkyl,
    cycloalkyl, cycloalkylalkyl, heterocycle or heterocyclealkyl;
         L = G-X1-J-X2-K1- or bond:
         G. J and K1 = alkyl, alkenyl, aryl or cycloalkyl (all optionally
     substituted by alkoxy, alkyl, halogen, hydroxy, hydroxyalkyl, carboxy or
     RdReN-) or bond:
          Rd and Re = H, alkyl, alkoxycarbonyl, alkylcarbonyl or arylalkyl;
         X1 and X2 = bond, -0-, -N(Rc)-, -N(Rc)C(0)-, -C(0)N(Rc)-.
     -N(Rc)S(0)2-, -S(0)2N(Rc)- and -C(0)-; and
          Rc = H, alkyl or arylalkyl.
          Provided that if J is absent then at least one of X1 and X2 must be
         ACTIVITY - Antidiabetic: Immunosuppressive; Antiinflammatory:
    Anorectic: Osteopathic: Cytostatic.
          MECHANISM OF ACTION - Protein tyrosine phosphatase-1B inhibitor.
    5-(3-((1E)-3-(3-hydroxy-2-(methoxycarbonyl)-phenoxy)prop-1-
    enyl)phenyl)isoxazole-3-carboxylic acid (Ia) was added to well containing
    pNPP in water. The reaction was initiated by adding diluted protein
     tyrosine phosphatase 1B and worked up. Results showed that (A) had Ki of
    5.7 plus or minus 0.9.
          USE - In pharmaceutical composition for treating disorders caused by
     overexpressed or altered protein tyrosine phosphatase 1B e.g. type I and
     II diabetes, impaired glucose tolerance, insulin resistance, obesity.
     autoimmune disorders, acute and chronic inflammatory disorders.
    osteoporosis, cancer and malignant disorders (all claimed).
          ADVANTAGE - (I) inhibits protein tyrosine phosphatase-1B.
    Dwg.0/0
    CPI
    AB: GI: DCN
    CPI: B05-B01E; B07-H; B14-C03; B14-D01E; B14-D07A; B14-E12; B14-F09;
          B14-G02D; B14-H01; B14-N01; B14-S04; N02-F; N07-D03
    ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
    2001-663337 [76] WPIX
DNN N2001-494250
    An intravascular device which minimizes the possibility of emboli from the
    plague entering the bloodstream by trapping it against the blood vessel
    wall.
    P32
    MULLER, P F; PATEL, U G; STACK, R S
    (ADCA-N) ADVANCED CARDIOVASCULAR SYSTEM; (MULL-I) MULLER P F; (PATE-I)
     PATEL U G; (STAC-I) STACK R S
CYC 95
    WO 2001082831 A2 20011108 (200176)* EN 32
                                                      A61F002-00
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TR TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
            LC LK ER LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD
            SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
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FΑ

18

DC

ΙN

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AU 2001053475 A 20011112 (200222)
                                                      A61F002-00
     US 6592616
                     B1 20030715 (200348)
                                                      A61F002-06
     US 2003195556 A1 20031016 (200369)
                                                      A61M029-00
ADT WO 2001082831 A2 WO 2001-US12152 20010412; AU 2001053475 A AU 2001-53475
     20010412; US 6592616 B1 US 2000-560209 20000428; US 2003195556 A1 Cont of
     US 2000-560209 20000428, US 2003-447407 20030529
FDT AU 2001053475 A Based on WO 2001082831; US 2003195556 A1 Cont of US
     6592616
PRAI US 2000-560209
                          20000428; US 2003-447407
     20030529
     ICM A61F002-00: A61F002-06: A61M029-00
IC
     WO 200182831 A UPAB: 20011227
     NOVELTY - An intravascular device (10) comprises a permanently implantable
     tubular net (12) made from a flexible. blood permeable and biocompatible
     material. An expandable member (20) is attached to each end of the net and
     is capable of expanding to contact the wall of the blood vessel to
     maintain the net over the plaque.
          DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
     following:
          (a) a catheter for delivering a stent and a plaque-trapping device
     into a blood vessel, comprising an inner member having an expandable
     contracted stent and a collapsed plaque-trapping device. and a retractable
     restraining sheath overlying the inner member and axially movable w.r.t.
     to it:
          (b) a system for treating an area of plaque in a blood vessel
     comprising the plaque-trapping device, an implantable stent and a delivery
     catheter:
          (c) a method of treating an area of plague in a blood vessel:
          (d) and a further intravascular device containing a means for
     maintaining a set longitudinal distance between the expandable members.
          USE - The device is used to trap an area of plaque against the wall
     of a blood vessel (claimed) during e.g. a balloon angioplasty or stenting
     procedure. It is particularly useful for procedures in critical arteries
     such as carotid arteries, where blockages must be avoided.
          ADVANTAGE - The device minimizes the possibility of emboli from the
     plague entering the bloodstream (claimed). It is not necessary to employ a
     filtering device to catch and remove debris in the bloodstream.
          {\tt DESCRIPTION\ OF\ DRAWING(S)\ -\ The\ drawing\ shows\ a\ perspective\ view\ of}
     the plaque-trapping device.
          plaque-trapping device: 10
     tubular net: 12
     proximal end: 14
     distal end: 16
     inner lumen; 18
          expandable member: 20
          longitudinal strut. 22
     Dwg.1/14
     GMPI
FS
FA
     AB; GI
FILE 'HOME' ENTERED AT 08:14:57 ON 11 MAR 2005
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=> d his
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(FILE 'HOME' ENTERED AT 08:12:38 ON 11 MAR 2005)
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FILE 'HCAPLUS' ENTERED AT 08:12:43 ON 11 MAR 2005
L1
              1 US20040214870/PN
                E US2003-447407/AP.PRN
              1 US2003-447407P/AP.PRN
L2
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L3 1 L1-2

FILE 'REGISTRY' ENTERED AT 08:13:32 ON 11 MAR 2005

FILE 'HCAPLUS' ENTERED AT 08:13:33 ON 11 MAR 2005 L4 TRA L3 1- RN : 97 TERMS

FILE 'REGISTRY' ENTERED AT 08:13:34 ON 11 MAR 2005 L5 97 SEA L4

FILE 'WPIX' ENTERED AT 08:13:36 ON 11 MAR 2005

1 US20040214870/PN L6 E US2003-447407/AP.PRN L7 2 (US2003-447407 OR US2003-447407P)/AP.PRN

L8 2 L6-7

FILE 'REGISTRY' ENTERED AT 08:27:41 ON 11 MAR 2005

L9 STR 1 L9 L10 52 L9 FULL L11 STR L9 L12 L13 0 L12 34 L12 FULL L14 SAV TEM L11 SAC926F0/A SAV TEM L14 SAC926F1/A

FILE 'HCAPLUS' ENTERED AT 08:38:27 ON 11 MAR 2005

15 L11 OR L14 L15 SEL AN 1-3 L15 L16 3 E1-6 AND L15 12 L15 NOT L16 L17

FILE 'REGISTRY' ENTERED AT 08:42:03 ON 11 MAR 2005 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

9 MAR 2005 HIGHEST RN 844817-50-1 STRUCTURE FILE UPDATES: 9 MAR 2005 HIGHEST RN 844817-50-1 DICTIONARY FILE UPDATES:

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

N----S C===0 @26 @27 @28 29

REP G1=(0-1) AK VAR G2=0/N/23-12 24-14/24-12 23-14/26-12 27-14/27-12 26-14/28 VAR G3=0/N/23-14 24-16/24-14 23-16/26-14 27-16/27-14 26-16/28 NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC 17 10 4 NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE

L11 52 SEA FILE=REGISTRY SSS FUL L9

100.0% PROCESSED 13924 ITERATIONS SEARCH TIME: 00.00.01

52 ANSWERS

=> d que sta 114 L12 STR

1 N C C C 3
50 C C 8
11 C C 9
17 C C 19

NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC 17 10 4

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L14 34 SEA FILE=REGISTRY SSS FUL L12

100.0% PROCESSED 2387 ITERATIONS

34 ANSWERS

SEARCH TIME: 00.00.01

=> b hcap
FILE 'HCAPLUS' ENTERED AT 08:42:19 ON 11 MAR 2005
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FILE COVERS 1907 - 11 Mar 2005 VOL 142 ISS 11 FILE LAST UPDATED: 9 Mar 2005 (20050309/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all fhitstr 116 tot

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L16 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
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AN 2004:905629 HCAPLUS

DN 141:379917

ED Entered STN: 29 Oct 2004

- TI Preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase (PTP1B) inhibitors.
- IN Xin. Zhili: Liu. Gang: Pei. Zhonghua: Szczepankiewicz. Bruce G.: Serby. Michael D.: Zhao. Hongyu

PA USA

SO U.S. Pat. Appl. Publ., 32 pp. CODEN: USXXCO

DT Patent

LA English

IC ICM A61K031-433

ICS A61K031-426; A61K031-4245; A61K031-421; A61K031-4196; A61K031-4172

NCL 514362000: 514383000: 514381000: 514365000: 514374000: 514364000: 514396000: 548136000: 548143000: 548202000

CC 28-6 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1, 63

FAN.CNT 1

	PATENT NO.			KIND	DATE		APPLICAT	DATE		
PΙ	US	20042148	70	A1	200410	28	US 2004-	771926	20040204	
PRAI	US	2003-447	407P	Р	200302	14				
CLASS	S									
PAT	ENT	NO.	CLASS	PATENT	FAMILY	CLASS	IFICATION	CODES		

US 2004214870 ICM A61K031-433

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ICS
                       A61K031-426: A61K031-4245: A61K031-421: A61K031-4196:
                       A61K031-4172
                NCL
                        514362000: 514383000: 514381000: 514365000: 514374000:
                        514364000; 514396000; 548136000; 548143000; 548202000
                       C07D261/18; C07D413/04+261+209C; C07D413/12+261+211
US 2004214870
                ECLA
    MARPAT 141:379917
    R1R2R3AB(R4)LCR5R6R7 [A = isoxazolyl, pyrazolyl, oxadiazolyl, triazolyl.
    isothiazolyl, imidazolyl, oxazolyl, tetrazolyl, thiadiazolyl: B. C = aryl.
    heterocyclyl: L = bond. GX1JX2K; G, J, K = bond. (substituted) alkyl.
    alkenyl, aryl, cycloalkyl; X1, X2 = bond, O. NRc, NRcCO, CO, NRcSO2; Rc =
    H, alkyl, aralkyl; R1 = alkyl, alkoxy, alkylsulfonyl,
    trifluoroalkylsulfonyl, alkylsulfonylaminoo, specified azolyl; R2-R7 =
    null, H. alkyl, alkylcarbonyl, alkoxy, alkoxyalkyl, aryl, arylcarbonyl,
    aralkyl, CO2H, halo, cyano, OH, hydroxylalkyl, NO2, trihaloalkyl, etc.;
    with provisos], were prepared Thus. Et 5-(tributylstannyl)isoxazole-3-
    carboxylate (preparation given), (E)-3-(3-iodophenyl)prop-2-en-1-ol (preparation
    given), tri-2-furylphosphine, tris(dibenzylideneacetone)dipalladium(0),
    and CuI were were stirred 30 min. in DMF to give Et 5-[3-[(1E)-3-
    hydroxyprop-1-enyl]phenyl]isoxazole-3-carboxylate. This was stirred with
    Me 2.6-dihydroxybenzoate, Ph3P, and di-Et azodicarboxylate in THF to give
    Et 5-[3-[(1E)-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-
    enyl]phenyl]isoxazole-3-carboxylate. The latter was stirred with 2N NaOH
    in THF/MeOH to give 5-[3-[(1E)-3-[3-hydroxy-2-
    (methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-carboxylic acid.
    This inhibited PTP1B with Kic = 5.7 .mu.M.
    arylisoxazolecarboxylate prepn protein tyrosine phosphatase inhibitor;
    isoxazolecarboxylate aryl prepn PTP1B inhibitor; inflammation cancer
    diabetes autoimmune disorder obesity treatment isoxazolecarboxylate prepn
    Inflammation
       (chronic, treatment; preparation of arylisoxazolecarboxylates as
       protein-tyrosine phosphatase inhibitors)
       (immune system agents; preparation of arylisoxazolecarboxylates as
       protein-tyrosine phosphatase inhibitors)
ΙT
    Diabetes mellitus
       (insulin-dependent, treatment; preparation of arylisoxazolecarboxylates as
       protein-tyrosine phosphatase inhibitors)
IT
    Diabetes mellitus
       (non-insulin-dependent, treatment; preparation of arylisoxazolecarboxylates
       as protein-tyrosine phosphatase inhibitors)
   Anti-inflammatory agents
    Antidiabetic agents
    Antiobesity agents
    Antitumor agents
    Drug delivery systems
    Himan
       (preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase
       inhibitors)
IT
    Osteoporosis
       (treatment, antiosteoporotics; preparation of arylisoxazolecarboxylates as
       protein-tyrosine phosphatase inhibitors)
IT
    Autoimmune disease
    Neoplasm
    Obesity 0
       (treatment: preparation of arylisoxazolecarboxylates as protein-tyrosine
       phosphatase inhibitors)
                   745078-73-3P 745078-78-8P 745078-82-4P
    745078-69-7P
                                  745078-90-4P
    745078-86-8P
                   745078-89-1P
                                                 745078-92-6P
    745078-93-7P 745078-94-8P 745078-96-0P 745078-98-2P
                                  745079-03-2P
                   745079-02-1P
    745079-00-9P
                                                 745079-04-3P
                                                                745079-07-6P
    745079-09-8P
                   745079-10-1P
                                  745079-12-3P 745079-13-4P
                                                                745079-18-9P
    RL: PAC (Pharmacological activity): SPN (Synthetic preparation); THU
    (Therapeutic use): BIOL (Biological study): PREP (Preparation): USES
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(Uses)
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(claimed compound: preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)

50-99-7, Glucose, biological studies ΙT

RL: BSU (Biological study, unclassified): BIOL (Biological study) (impaired glucose tolerance, treatment; preparation of

arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)

IT 300865-11-6. Protein tyrosine phosphatase-1B

RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors: preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)

74-89-5. Methylamine. reactions 75-36-5. Acetyl chloride 452-82-4. 4-Fluoro-3-iodotoluene 497-06-3. 3-Butene-1,2-diol 540-51-2. 2-Bromoethanol 553-90-2, Dimethyl oxalate 598-32-3, 3-Buten-2-ol 601-89-8. 2-Nitroresorcinol 616-25-1, 1-Penten-3-ol 626-01-7. 3-Iodoaniline 696-41-3, 3-Iodobenzaldehyde 867-13-0, Triethyl phosphonoacetate 994-89-8, Tributylstannylacetylene 1007-15-4 1664-54-6, 3-(3-Aminophenyl)propionic acid 2142-63-4, 3'-Bromoacetophenone 2150-45-0, Methyl 2,6-dihydroxybenzoate 3132-99-8. 3-Bromobenzaldehyde 10272-07-8 10365-98-7. 3-Methoxyphenylboronic acid 14337-43-0. Ethyl chlorooximidoacetate 14452-30-3. 3'-Iodoacetophenone 52415-29-9. 6-Bromoindole 54060-30-9. 3-Ethynylphenylamine 58313-23-8, Ethyl 3-iodobenzoate 95037-48-2. 1-Acetylpiperidine-4-carbonyl chloride hydrochloride 745079-28-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)

ΙT 3147-50-0P 14367-96-5P 20950-56-5P. [1.1'-Bipheny1]-3.3'.5-triol 25245-27-6P 30578-88-2P 33580-34-6P 68034-75-3P 68332-33-2P 73164-56-4P 81069-39-8P 83968-02-9P 93618-22-5P 119125-28-9P 141763-48-6P 126085-91-4P 185619-66-3P 227609-88-3P 281204-55-5P 745078-74-4P 745078-75-5P 745078-70-0P 745078-71-1P 745078-72-2P 745078-76-6P 745078-79-9P 745078-83-5P 745078-84-6P 745078-85-7P 745078-91-5P **745078-95-9P** 745078-97-1P 745079-05-4P 745079-06-5P 745079-11-2P 745079-14-5P 745079-15-6P 745079-16-7P 745079-22-5P 745079-17-8P 745079-19-0P 745079-23-6P 745079-24-7P 745079-26-9P 745079-27-0P 745079-29-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)

745078-78-8P

RL: PAC (Pharmacological activity): SPN (Synthetic preparation): THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(claimed compound; preparation of arylisoxazolecarboxylates as protein-tyrosine phosphatase inhibitors)

745078-78-8 HCAPLUS

(Reactant or reagent)

CN 3-Isoxazolecarboxylic acid, 5-[3-[[2-[3-hydroxy-2-(methoxycarbonyl)phenoxy]ethyl]amino]phenyl]- (9CI) (CA INDEX NAME)

- L16 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
- AN 2004:863100 HCAPLUS
- DN 142:232
- ED Entered STN: 19 Oct 2004
- TI Isoxazole carboxylic acids as protein tyrosine phosphatase 1B (PTP1B)
- AU Zhao. Hongyu: Liu. Gang: Xin. Zhili: Serby. Michael D.; Pei. Zhonghua: Szczepankiewicz. Bruce G.; Hajduk. Philip J.; Abad-Zapatero. Cele: Hutchins. Charles W.; Lubben. Thomas H.; Ballaron. Stephen J.; Haasch. Deanna L.; Kaszubska. Wiweka: Rondinone. Cristina M.; Trevillyan. James M.; Jirousek. Michael R.
- CS Metabolic Disease Research. Global Pharmaceutical Research and Development. Abbott Laboratories. Abbott Park. IL. 60064-6098. USA
- SO Bioorganic & Medicinal Chemistry Letters (2004). 14(22). 5543-5546 CODEN: BMCLE8: ISSN: 0960-894X
- PB Elsevier B.V.
- DT Journal
- LA English
- CC 1-3 (Pharmacology)
 Section cross-reference(s): 28

GI

I

- AB Guided by X-ray crystallog., we have extended the structure-activity relationship (SAR) study on an isoxazole carboxylic acid-based PTP1B inhibitor and more potent and equally selective (>20-fold selectivity over the highly homologous T-cell PTPase, TCPTP) PTP1B inhibitors were identified. Inhibitor I demonstrated good cellular activity against PTP1B in COS 7 cells.
- ST isoxazole carboxylate prepn protein tyrosine phosphatase inhibitor structure
- IT Structure-activity relationship
 - (isoxazole carboxylic acids as protein tyrosine phosphatase 1B inhibitors)
- IT 300865-11-6. Protein tyrosine phosphatase 1B
 - RL: BSU (Biological study, unclassified): BIOL (Biological study) (isoxazole carboxylic acids as protein tyrosine phosphatase 1B inhibitors)
- IT 745079-13-4P 745079-21-4P

inhibitors)

- RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 - (isoxazole carboxylic acids as protein tyrosine phosphatase ${\tt 1B}$ inhibitors)
- IT **745078-78-8** 745078-92-6 **794525-51-2** 794525-52-3 794525-53-4
 - RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 - (Biological study): USES (Uses)
 (isoxazole carboxylic acids as protein tyrosine phosphatase 1B
- IT 2150-45-0. Methyl 2,6-dihydroxybenzoate 14337-43-0. Ethyl chlorooximido

acetate 74141-12-1 745079-22-5 794525-54-5 RL: RCT (Reactant): RACT (Reactant or reagent) (isoxazole carboxylic acids as protein tyrosine phosphatase 1B

inhibitors)

745079-16-7P 745079-17-8P 745079-23-6P 745079-26-9P 745079-27-0P 745079-29-2P 794525-55-6P 794525-56-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(isoxazole carboxylic acids as protein tyrosine phosphatase 1B inhibitors)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

- (1) Barford, D: Science 1994, V263, P1397 HCAPLUS
- (2) Cheng. A; Eur J Biochem 2002, V269, P1050 HCAPLUS
- (3) Elchebly, M: Science 1999, V283, P1544 HCAPLUS
- (4) Ibarra-Sanchez, M; Seminars Immunol 2000, V12, P379 HCAPLUS
- (5) Johnson, T; Nature Rev Drug Discov 2002, V1, P696 HCAPLUS
- (6) Jung, M; Tetrahedron Lett 1982, V23, P3851 HCAPLUS
- (7) Kaszubska, W: J Mol Cell Endocrinol 2002, V195, P109 HCAPLUS
- (8) Klaman, L; Mol Cell Biol 2000, V20, P5479 HCAPLUS
- (9) Larsen, S; Bioorg Med Chem Lett 2003, V13, P971 HCAPLUS
- (10) Lehr, F; Helv Chim Acta 1979, V62, P2258 HCAPLUS
- (11) Liljebris. C: J Med Chem 2002, V45, P1785 HCAPLUS
- (12) Liu, G; Curr Opin Investig Drugs 2002, V3, P1608 HCAPLUS
- (13) Liu, G; J Med Chem 2003, V46, P4232 HCAPLUS
- (14) Piaz, V; Synthesis 1975, P664
- (15) Posner, B; J Biol Chem 1994, V269, P4596 HCAPLUS
- (16) Protein Data Bank; www.rcsb.org
- (17) Puius, Y; Proc Natl Acad Sci U S A 1997, V94, P13420 HCAPLUS
- (18) Sarmiento, M: Biochemistry 2000, V39, P8171 HCAPLUS
- (19) Shen, K; J Biol Chem 2001, V276, P47311 HCAPLUS
- (20) Sun, J; J Biol Chem 2003. V278. P12406 HCAPLUS
- (21) Szczepankiewicz, B; J Am Chem Soc 2003, V125, P4087 HCAPLUS
- (22) Wierenga, W; J Org Chem 1979, V44. P310 HCAPLUS
- (23) Xie, L; Biochemistry 2003, V42. P12792 HCAPLUS
- (24) Zabolotny, J; Dev Cell 2002, V2, P489 HCAPLUS
- (25) Zhang, Z; Expert Opin Investig Drug 2003, V12, P223 HCAPLUS
- (26) Zinker, B; Proc Natl Acad Sci U S A 2002, V99, P11357 HCAPLUS
- 745078-78-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(isoxazole carboxylic acids as protein tyrosine phosphatase 1B

inhibitors)

RN 745078-78-8 HCAPLUS

3-Isoxazolecarboxylic acid. 5-[3-[[2-[3-hydroxy-2-CN (methoxycarbonyl)phenoxy]ethyl]amino]phenyl]- (9CI) (CA INDEX NAME)

L16 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:701813 HCAPLUS

141:225493

Entered STN: 27 Aug 2004

```
Preparation of arylazole derivatives as protein-tyrosine phosphatase
IN
    Xin, Zhili: Liu, Gang: Pei, Zhonghua: Szczepankiewicz, Bruce G.; Serby.
    Michael D.: Zhao, Hongyu
PA
S0
    U.S. Pat. Appl. Publ., 32 pp.
    CODEN: USXXCO
ŊΤ
    Pat.ent.
LA
    English
IC
    ICM A61K031-675
     ICS A61K031-433
NCL 514363000; 514364000; 514365000; 514374000; 514381000; 514396000;
     514406000: 514079000: 548112000: 548128000
    28-6 (Heterocyclic Compounds (More Than One Hetero Atom))
     Section cross-reference(s): 1, 7
FAN.CNT 1
     PATENT NO.
                        KIND
                                          APPLICATION NO.
                                                                DATE
PΤ
   US 2004167188
                         Α1
                               20040826
                                          US 2003-366830
                                                                20030214
PRAI US 2003-366830
                               20030214
CLASS
 PATENT NO.
                CLASS PATENT FAMILY CLASSIFICATION CODES
                       ______
 US 2004167188
                ICM
                       A61K031-675
                ICS
                       A61K031-433
                       514363000; 514364000; 514365000; 514374000; 514381000;
                NCL
                       514396000; 514406000; 514079000; 548112000; 548128000
 US 2004167188
                ECLA
                       C07D261/18; C07D413/04+261+209C; C07D413/12+261+211
    MARPAT 141:225493
GI
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- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- The present invention is directed to compds. of formula (I), or pharmaceutically suitable salts or prodrugs thereof [wherein A = Q-Q16; B. C = aryl. heterocycle; R1 = alkyl. alkoxy. alkylsulfonyl. trifluoroalkylsulfonyl, trifluoroalkylamino, alkylsulfamoyl, CO2H or its ester, cyano, N-hydroxycarbamoyl or its ether, nitro, HO3S, (un)substituted sulfamoyl, (H0)2(0)P, (H0)2(0)PCH2, (H0)2(0)PCHF, (HO)2(O)PCF2, heterocycle; R2-R7 = H, alkyl, alkylcarbonyl, alkoxy, alkoxyalkyl, alkoxycarbonyl, aryl, arylcarbonyl, arylalkyl, carboxy. carboxyalkyl, cyano, cycloalkyl, cycloalkylalkyl, halo, haloalkyl, heterocycle, heterocyclecarbonyl, heterocyclealkyl, hydroxy, hydroxyalkyl, nitro, trihaloalkyl, each (un)substituted NH2, CONH2, or SO2NH2, etc.: L = -G-X1-J-X2-K- or a bond; G, J, K = a bond, each (un)substituted alkyl. alkenyl, aryl, or cycloalkyl; X1, X2 = a bond, O, N(Rc), N(Rc)CO. C(0)N(Rc), N(Rc)S(0)2, S(0)2N(Rc), C(0); wherein Rc = H, alkyl, arylalkyl; provided that if J is absent, then at least one of X1 and X2 must be absent]. These compds. are useful for the selective inhibition of protein tyrosine phosphatase-1B (PTP1B), and are useful for the treatment of disorders caused by overexpressed or altered protein tyrosine phosphatase 1B. i.e. (1) type I and type II diabetes, impaired glucose tolerance and insulin resistance. (2) obesity, and (3) autoimmune disorders, acute and chronic inflammatory disorders, osteoporosis, cancer, and malignant disorders. Thus, Et 5-[3-[(1E)-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-carboxylate > [0172]. Etherification of Et 5-[3-((1E)-3-hydroxyprop-1enyl)phenyl]isoxazole-3-carboxylate with Me 2.6-dihydroxybenzoate using triphenylphosphine and di-Et azodicarboxylate in THF at ambient temperature for 30 min gave Et 5-[3-[(1E)-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1enyl]phenyl]isoxazole-3-carboxylate which was dissolved in THF/MeOH.

stirred with 2 N aqueous NaOH for 10 min, and acidified with 1 N aqueous HC1 to give 5-[3-[(1E)-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1enyl]phenyl]isoxazole-3-carboxylic acid (II). II showed phosphatase inhibition consts. (Ki) of 5.7.+-.0.9, 201.6.+-.26.5, and >300 .mu.M against protein tyrosine phosphatase-1B. T-Cell protein tyrosine phosphatase (TC-PTP), and SHP-2 phosphatase, resp. phenylisoxazole prepn protein tyrosine phosphatase inhibitor; arylazole prepn protein tyrosine phosphatase inhibitor: diabetes treatment phenylisoxazole prepn; impaired glucose tolerance treatment phenylisoxazole prepn; insulin resistance treatment phenylisoxazole prepn; obesity treatment phenylisoxazole prepn: autoimmune disorder treatment phenylisoxazole prepn: inflammatory disorder treatment phenylisoxazole prepn; osteoporosis treatment phenylisoxazole prepn; cancer treatment phenylisoxazole prepn Inflammation (acute: preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) Inflammation (chronic; preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) Diabetes mellitus (insulin-dependent; preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) Diabetes mellitus (non-insulin-dependent; preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) IT Anti-inflammatory agents Antidiabetic agents Antiobesity agents Antitumor agents Autoimmune disease Neoplasm Obesity Osteoporosis (preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) Bone (resorption, inhibitors; preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) IT 50-99-7, D-Glucose, biological studies RL: BSU (Biological study, unclassified); BIOL (Biological study) (impaired glucose tolerance: preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B) 14367-96-5P, 1-(3-Bromophenyl)-2-nitroethanone 20950-56-5P. 3.5.3'-Trihydroxybiphenyl 25245-27-6P. 3.5-Dimethoxyiodobenzene 30578-88-2P, Methyl 2.6-dihydroxy-3-nitrobenzoate 33580-34-6P. 3.5.3'-Trimethoxybiphenyl 52234-79-4P. N-Methyl-2.6-dihydroxybenzamide 68034-75-3P, 3-(3-Iodophenyl)propionic Acid 68332-33-2P, Ethyl 3-(3-iodophenyl)-3-oxopropanoate 73164-56-4P. N-(2.6-Dihydroxyphenyl)acetamide 81069-39-8P. Ethyl (2E)-3-(3-iodophenyl)-2propenoate 83968-02-9P. 2.2-Dimethyl-4-vinyl-1.3-dioxolane 93618-22-5P, Methyl 4-(3-bromophenyl)-2,4-dioxobutanoate 119125-28-9P. 1-[(tert-Butyldimethylsilyl)oxy]but-3-en-2-ol 126085-91-4P. Ethyl 5-(tributylstannyl)isoxazole-3-carboxylate 141763-48-6P. 3-(3-Iodophenyl)-1-propanol 185619-66-3P. (3-Ethynylphenyl)carbamic Acid tert-Butyl Ester 227609-88-3P. 4-Fluoro-3-iodobenzaldehyde 260050-97-3P. 4-Fluoro-3-iodobenzyl bromide 281204-55-5P.

IT

ΙT

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2-(6-Bromo-1H-indol-1-yl)ethanol 609848-44-4P. Methyl
 5-(3-iodophenyl)isoxazole-3-carboxylate 745078-70-0P.
 (2E)-3-(3-Iodophenyl)prop-2-en-1-ol 745078-71-1P. Ethyl
 5-[3-((1E)-3-hydroxyprop-1-enyl)phenyl]isoxazole-3-carboxylate
 745078-72-2P. Ethyl 5-[3-[(1E)-3-[3-hydroxy-2-
 (methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-carboxylate
 745078-74-4P. 5-(3-Bromophenyl)isoxazole-3-carboxylic Acid Methyl Ester
 745078-75-5P. 5-[3-(3-0xobutyl)phenyl]isoxazole-3-carboxylic Acid Methyl
        745078-76-6P, Methyl 5-[3-(3-hydroxybutyl)phenyl]isoxazole-3-
 carboxylate 745078-77-7P, Methyl 5-[3-[3-hydroxy-2-
 (methoxycarbonyl)phenoxy]butyl]phenyl]isoxazole-3-carboxylate
 745078-79-9P, 2-[(3-Iodophenyl)amino]ethanol 745078-80-2P, Methyl
 2-hydroxy-6-[2-[(3-iodophenyl)amino]ethoxy]benzoate 745078-81-3P
   Ethyl 5-[3-[[2-[3-hydroxy-2-(methoxycarbonyl)phenoxy]ethyl]amino]phenyl]
 isoxazole-3-carboxylate 745078-83-5P, 5-(3-tert-
 Butoxycarbonylaminophenyl)isoxazole-3-carboxylic acid Ethyl Ester
 745078-84-6P, Ethyl 5-(3-aminophenyl)isoxazole-3-carboxylate
 745078-85-7P, Ethyl 5-[3-[[(1-acetylpiperidin-4-
 yl)carbonyl]amino]phenyl]isoxazole-3-carboxylate 745078-87-9P.
 2-Hydroxy-6-[2-[(3-iodophenyl)amino]ethoxy]-N-methylbenzamide
 745078-88-0P, Ethyl 5-[3-[[2-[3-hydroxy-2-
 [(methylamino)carbonyl]phenoxy]ethyl]amino]phenyl]isoxazole-3-carboxylate
 745078-91-5P, 5-[3-(3-Hydroxypropyl)phenyl]isoxazole-3-carboxylic Acid
 Ethyl Ester 745078-95-9P, Methyl 5-[3'-[3-
 (methoxycarbonyl)isoxazol-5-yl]-1.1'-biphenyl-3-yl]isoxazole-3-carboxylate
 745078-97-1P. Ethyl (1R.2R)-2-(3-iodophenyl)cyclopropanecarboxylate
 745078-99-3P. Methyl 5-(3-bromo-4-methoxyphenyl)isoxazole-3-carboxylate
 745079-01-0P. Methyl 5-(3-bromo-4-fluorophenyl)isoxazole-3-carboxylate
 745079-05-4P. Methyl 2-[[1-[[(tert-butyldimethylsilyl)oxy]methyl]prop-2-
 enyl]oxy]-6-hydroxybenzoate 745079-06-5P. Methyl 5-[3-[(1E)-4-[(tert-
 butyldimethylsilyl)oxy]-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]but-1-
 envllphenvllisoxazole-3-carboxylate 745079-08-7P, Ethyl
 5-[1-(2-hydroxyethyl)-1H-indol-6-yl]isoxazole-3-carboxylate
 745079-11-2P, N-Benzyl-2,6-dihydroxybenzamide 745079-14-5P, Ethyl
 5-(3-bromophenyl)-4-nitroisoxazole-3-carboxylate 745079-15-6P. Ethyl 4-amino-5-(3-bromophenyl)isoxazole-3-carboxylate 745079-16-7P. Ethyl
 4-amino-5-[3-((1E)-3-hydroxyprop-1-enyl)phenyl]isoxazole-3-carboxylate
 745079-17-8P, Ethyl 4-amino-5-[3-[(1E)-3-[3-hydroxy-2-
 (methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-carboxylate
 745079-19-0P, 3,5,3'-Trihydroxybiphenyl-4-carboxylic Acid Methyl Ester
 745079-22-5P, tert-Butyl 3-(3-iodophenyl)-3-oxopropanoate 745079-23-6P
 745079-24-7P. Ethyl 4-(hydroxymethyl)-5-(3-iodophenyl)isoxazole-3-
 carboxylate 745079-25-8P 745079-26-9P, Ethyl 4-[(acetyloxy)methyl]-5-
 (3-iodophenyl)isoxazole-3-carboxylate 745079-27-0P. Ethyl
 4-[(acetyloxy)methyl]-5-[3-((1E)-3-hydroxyprop-1-enyl)phenyl]isoxazole-3-
 carboxylate 745079-29-2P, Ethyl 4-[(acetyloxy)methyl]-5-[3-[(1E)-3-[3-
 hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-
 carboxylate
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
    (intermediate; preparation of arylazole derivs. as protein-tyrosine
    phosphatase inhibitors for treating disorders caused by overexpressed
    or altered protein tyrosine phosphatase 1B)
 300865-11-6. Protein tyrosine phosphatase 1B
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
    (preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors
    for treating disorders caused by overexpressed or altered protein
    tyrosine phosphatase 1B)
745078-69-7P. 5-[3-[(1E)-3-[3-Hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-
 enyl]phenyl]isoxazole-3-carboxylic Acid 745078-73-3P.
 5-[3-[3-[3-Hydroxy-2-(methoxycarbonyl)phenoxy]butyl]phenyl]isoxazole-3-
 carboxylic Acid 745078-78-8P, 5-[3-[[2-[3-Hydroxy-2-
 (methoxycarbonyl)phenoxy]ethyl]amino]phenyl]isoxazole-3-carboxylic Acid
 745078-82-4P. 5-[3-[[(1-Acetylpiperidin-4-yl)carbonyl]amino]phenyl]isoxazo
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le-3-carboxylic Acid 745078-86-8P. 5-[3-[[2-[3-Hydroxy-2-
[(methylamino)carbonyl]phenoxy]ethyl]amino]phenyl]isoxazole-3-carboxylic
Acid 745078-89-1P, 5-[3-[(1E)-3-[3-Hydroxy-2-
[(methylamino)carbonyl]phenoxy]prop-1-enyl]phenyl]isoxazole-3-carboxylic
Acid 745078-90-4P. 5-[3-[3-[3-Hydroxy-2-(methoxycarbonyl)phenoxy]propyl]
phenyl]isoxazole-3-carboxylic Acid 745078-92-6P, 5-[2-Fluoro-5-[(1E)-3-
[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]isoxazole-3-
carboxvlic Acid 745078-93-7P. 5-[3-[(1E)-3-(3-Hydroxy-2-
nitrophenoxy)prop-1-enyl]phenyl]isoxazole-3-carboxylic Acid
745078-94-8P. 5-[3'-[3-(Carboxy)isoxazol-5-yl]-1.1'-biphenyl-3-
yl]isoxazole-3-carboxylic Acid 745078-96-0P, 5-[3-[(1S.2S)-2-[[3-Hydroxy-
2-(methoxycarbonyl)phenoxy]methyl]cyclopropyl]phenyl]isoxazole-3-
carboxylic Acid 745078-98-2P, 5-[3-[3-[3-Hydroxy-2-
(methoxycarbonyl)phenoxy]butyl]-4-methoxyphenyl]isoxazole-3-carboxylic
Acid 745079-00-9P, 5-[4-Fluoro-3-[3-[3-hydroxy-2-
(methoxycarbonyl)phenoxy[butyl]phenyl]isoxazole-3-carboxylic Acid
745079-02-1P, 5-[3-[3-[3-Hydroxy-2-(methoxycarbonyl)phenoxy]pentyl]phenyl]
isoxazole-3-carboxylic Acid 745079-03-2P, 5-[3-[(1E)-3-(3-Hydroxy-2-
propionylphenoxy)prop-1-enyl]phenyl]isoxazole-3-carboxylic Acid
745079-04-3P, 5-[3-[(1E)-4-Hydroxy-3-[3-hydroxy-2-
(methoxycarbonyl)phenoxy]but-1-enyl]phenyl]isoxazole-3-carboxylic Acid
745079-07-6P, 5-[1-[2-[3-Hydroxy-2-(methoxycarbonyl)phenoxy]ethyl]-1H-
indol-6-yl]isoxazole-3-carboxylic Acid 745079-09-8P,
5-[3-[(1E)-3-[2-(Acetylamino)-3-hydroxyphenoxy]prop-1-
enyl]phenyl]isoxazole-3-carboxylic Acid 745079-10-1P.
5-[3-[(1E)-3-[2-[(Benzylamino)carbonyl]-3-hydroxyphenoxy]prop-1-
enyl]phenyl]isoxazole-3-carboxylic Acid 745079-12-3P.
5-[3-[(1E)-3-[3-Hydroxy-2-(methoxycarbonyl)-4-nitrophenoxy]prop-1-
enyl]phenyl]isoxazole-3-carboxylic Acid 745079-13-4P.
4-Amino-5-[3-[(1E)-3-[3-hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-
enyl]phenyl]isoxazole-3-carboxylic Acid 745079-18-9P.
5-[3-[(1E)-3-[[3',5-Dihydroxy-4-(methoxycarbonyl)-1,1'-biphenyl-3-
yl]oxy]prop-1-enyl]phenyl]isoxazole-3-carboxylic Acid 745079-20-3P.
5-[3-[3-[(5,3'-Dihydroxy-4-methoxycarbonylbiphenyl-3-yl)oxy]-2-
propenyl]phenyl]isoxazole-3-carboxylic Acid 745079-21-4P.
5-[3-[(1E)-3-[3-Hydroxy-2-(methoxycarbonyl)phenoxy]prop-1-enyl]phenyl]-4-
(hydroxymethyl)isoxazole-3-carboxylic Acid
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use): BIOL (Biological study): PREP (Preparation): USES
(Uses)
   (preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors
   for treating disorders caused by overexpressed or altered protein
   tyrosine phosphatase 1B)
74-89-5. Methylamine, reactions 75-36-5. Acetyl chloride 75-65-0.
tert-Butanol. reactions 77-76-9. 2.2-Dimethoxypropane 100-46-9.
Benzylamine, reactions 107-18-6, Allyl alcohol, reactions 452-82-4.
4-Fluoro-3-iodotoluene 497-06-3. 3-Butene-1.2-diol 540-51-2.
2-Bromoethanol 553-90-2, Dimethyl oxalate 601-89-8, 2-Nitroresorcinol
616-25-1. 1-Penten-3-ol 626-01-7. 3-Iodoaniline 688-73-3. Tributyltin
696-41-3. 3-Iodobenzaldehyde 867-13-0. Triethyl phosphonoacetate
1007-15-4, 3'-Bromo-4'-fluoroacetophenone 1664-54-6.
3-(3-Aminophenyl)propionic acid 2142-63-4, 3'-Bromoacetophenone
2150-45-0, Methyl 2.6-dihydroxybenzoate 3132-99-8, 3-Bromobenzaldehyde
3361-72-6, 1-(2,6-Dihydroxyphenyl)propanone 5470-11-1 10272-07-8.
3.5-Dimethoxyaniline 10365-98-7. 3-Methoxyphenylboronic acid
14337-43-0, Ethyl chlorooximidoacetate 14452-30-3, 3'-Iodoacetophenone
18162-48-6, tert-Butyldimethylsilyl chloride 29346-30-3.
3-(Tributylstannyl)-1-propanol 39257-56-2, 2-Iodoethyl cinnamate
52415-29-9, 6-Bromoindole 54060-30-9, 3-Ethynylphenylamine 58313-23-8,
Ethyl 3-iodobenzoate 74141-12-1 95037-48-2, 1-Acetylpiperidine-4-
carbonyl chloride hydrochloride
RL: RCT (Reactant): RACT (Reactant or reagent)
   (reactant: preparation of arylazole derivs. as protein-tyrosine phosphatase
   inhibitors for treating disorders caused by overexpressed or altered
```

protein tyrosine phosphatase 1B)

IT 9004-10-8. Insulin. biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (resistance; preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B)

745078-81-3P. Ethyl 5-[3-[[2-[3-hydroxy-2-

(methoxycarbonyl)phenoxy]ethyl]amino]phenyl]isoxazole-3-carboxylate RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of arylazole derivs. as protein-tyrosine phosphatase inhibitors for treating disorders caused by overexpressed or altered protein tyrosine phosphatase 1B)

745078-81-3 HCAPLUS

3-Isoxazolecarboxylic acid, 5-[3-[[2-[3-hydroxy-2-(methoxycarbonyl)phenoxy]ethyl]amino]phenyl]-. ethyl ester (9CI) (CA INDEX NAME)

=> d all hitstr 117 tot

L17 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

2004:696360 HCAPLUS AN

DN 141:225492

Entered STN: 26 Aug 2004

Preparation of isoxazoles as inhibitors of heat shock proteins

Drysdale, Martin James; Dymock, Brian William; Finch, Harry; Webb, Paul; Mcdonald, Edward; James, Karen Elizabeth; Cheung, Kwai Ming; Mathews.

Vernalis Cambridge Limited, UK: Cancer Research Technology Ltd: The Institute of Cancer Research; et al.

PCT Int. Appl., 180 pp.

CODEN: PIXXD2

DT Patent

ΙA English

ICM C07D261-08

ICS C07D413-04; C07D413-10; C07D417-04; C07D261-10; C07D495-04; A61P035-00

CC 28-6 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1, 63

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PATENT NO.			KIND DATE		APPLICATION NO.					DATE								
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ΡI	WO 2004072051					A1 20040826			WO 2004-GB506					20040209				
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			ES.	FI.	FI.	GB.	GD.	GE.	GE.	GH.	GM.	HR.	HR.	HU,	ΗU,	ID,	IL.	IN.
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PRAI GB 2003-3105
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     GB 2003-13751
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CLASS
                  CLASS PATENT FAMILY CLASSIFICATION CODES
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                  ICM
                          C07D261-08
 WO 2004072051
                          C07D413-04: C07D413-10: C07D417-04: C07D261-10:
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 WO 2004072051
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                          C07D413/10+261+211: C07D413/10+261+213:
                          C07D413/10307B+261: C07D417/04+277B+261:
                          C07D495/04+333B+235B
     MARPAT 141:225492
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$$R^1$$
 R^2 R^3 I

$$R1$$
 $R2$
 $R3$
 II

AB Title compds. [I. II: R1 = Ar1(Alk1)p(Z)r(Alk2)sQ: Ar1 = (substituted) aryl. heteroaryl: Alk1. Alk2 = (substituted) alkylene. alkenylene: p, r, s = 0, 1: Z = 0, S, CO, CS, SO2, CO2, CONRA, CSNRA, SO2NRA, NRACO, NRASO2, NRA; RA = H, alkyl: Q = H, (substituted) carbocyclyl. heterocyclyl: R2 = Ar1(Alk1)p(Z)r(Alk2)sQ, carboxamide. carbocyclyl, heterocyclyl optionally substituted by (Alk1)pZr(Alk2)sQ; R3 = H, (substituted) cycloalkyl, cycloalkenyl, alkyl, alkenyl, alkynyl, carboxyl, carboxamide. carboxyl ester], were prepared Thus, NH2OH.HCl and 7-hydroxy-3-(4-methoxyphenyl)-2-methylchromen-4-one (preparation given) were refluxed 4 h in pyridine to give 4-[4-(4-methoxyphenyl)-3-methylisoxazol-5-yl]benzene-1,3-diol. The latter in the Malachite Green ATPase assay inhibited HSP90 with IC50 <50 .mu.M.

ST isoxazole prepn heat shock protein inhibitor: cancer viral infection

arthritis asthma multiple sclerosis treatment arylisoxazole

IT Brain, disease

Prion diseases

(Creutzfeldt-Jakob. treatment: preparation of isoxazoles as inhibitors of heat shock proteins) $\ \ \,$

IT Heat-shock proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HSP 70; preparation of isoxazoles as inhibitors of heat shock proteins)

IT Heat-shock proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HSP 90, inhibitors; preparation of isoxazoles as inhibitors of heat shock proteins)

IT Nervous system, disease

(Huntington's chorea, treatment; preparation of isoxazoles as inhibitors of heat shock proteins)

IT Eye, disease

(diabetic retinopathy, treatment: preparation of isoxazoles as inhibitors of heat shock proteins)

IT Uterus, disease

(endometriosis, treatment; preparation of isoxazoles as inhibitors of heat shock proteins) $\$

IT Apoptosis

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(failure treatment; preparation of isoxazoles as inhibitors of heat shock
        proteins)
    Blood vessel, neoplasm
IT
        (hemangioma, treatment; preparation of isoxazoles as inhibitors of heat
        shock proteins)
IT
    Intestine, disease
        (inflammatory, treatment: preparation of isoxazoles as inhibitors of heat
        shock proteins)
    Diabetes mellitus
ΙT
        (insulin-dependent, treatment; preparation of isoxazoles as inhibitors of
       heat shock proteins)
IT
    Anti-Alzheimer's agents
     Antiasthmatics
    Antidiabetic agents
    Antirheumatic agents
    Antitumor agents
     Antiviral agents
     Drug delivery systems
    Human
        (preparation of isoxazoles as inhibitors of heat shock proteins)
    Brain, disease
    Prion diseases
       (scrapie, treatment; preparation of isoxazoles as inhibitors of heat shock
       proteins)
    Chemotherapy
        (toxicity treatment: preparation of isoxazoles as inhibitors of heat shock
        proteins)
   Alzheimer's disease
     Asthma
     Cystic fibrosis
    Hypoxia, animal
     Ischemia
    Lupus erythematosus
    Multiple sclerosis
    Neoplasm
     Psoriasis
    Rheumatoid arthritis
        (treatment; preparation of isoxazoles as inhibitors of heat shock proteins)
IT
    Infection
        (viral, treatment; preparation of isoxazoles as inhibitors of heat shock
       proteins)
    747412-76-6P
     RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); RACT (Reactant or reagent); USES (Uses)
        (claimed compound: preparation of isoxazoles as inhibitors of heat shock
        proteins)
ΙT
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     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
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     (Uses)
        (claimed compound: preparation of isoxazoles as inhibitors of heat shock
        proteins)
   747413-08-7P
     RL: PAC (Pharmacological activity): RCT (Reactant); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); RACT (Reactant or reagent): USES (Uses)
        (preparation of isoxazoles as inhibitors of heat shock proteins)
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              747757-18-2P
RL: PAC (Pharmacological activity): SPN (Synthetic preparation): THU
(Therapeutic use): BIOL (Biological study); PREP (Preparation); USES
(Uses)
   (preparation of isoxazoles as inhibitors of heat shock proteins)
75-04-7, Ethylamine, reactions 75-65-0, 2-Methyl-2-propanol, reactions
77-77-0. Divinyl sulfone 79-22-1. Methyl chloroformate 79-31-2. Isobutyric acid 89-84-9 95-88-5. 4-Chlororesorcinol 95-92-1. Diethyl
oxalate 98-80-6, Phenylboronic acid 100-52-7, Benzaldehyde, reactions
103-72-0. Phenyl isothiocyanate 104-01-8, 4-Methoxyphenylacetic acid
108-24-7. Acetic anhydride 108-36-1. 1.3-Dibromobenzene 108-46-3.
Resorcinol, reactions 109-01-3, N-Methylpiperazine 110-91-8,
Morpholine, reactions 131-56-6, 2,4-Dihydroxybenzophenone 141-78-6,
Ethyl acetate, reactions 405-50-5, 4-Fluorophenylacetic acid 541-41-3.
Ethyl chloroformate 619-66-9, 4-Formylbenzoic acid 700-87-8,
2-Methoxyphenyl isocyanate 1663-39-4. tert-Butyl acrylate 1765-93-1,
4-Fluorophenylboronic acid 1779-49-3. Methyltriphenylphosphonium bromide
2591-86-8, N-Formylpiperidine 2896-60-8, 4-Ethylresorcinol
Methyl vinyl sulfone 3964-57-6, Methyl 3-chloro-4-hydroxybenzoate
4068-78-4, Methyl 5-chloro-2-hydroxybenzoate 4755-77-5, Ethyl
chlorooxoacetate 5720-07-0, 4-Methoxyphenylboronic acid 6783-05-7,
trans-2-Phenylvinylboronic acid 39546-32-2. Isonipecotamide
63503-60-6, 3-Chlorobenzeneboronic acid 66698-28-0, 1-(4-
Bromophenyl)piperazine 75705-21-4, 4-Aminomethylphenylboronic acid
hydrochloride 87199-16-4, 3-Formylbenzeneboronic acid 364794-79-6
477218-10-3 558643-26-8 747414-83-1 747414-85-3
RL: RCT (Reactant): RACT (Reactant or reagent)
   (preparation of isoxazoles as inhibitors of heat shock proteins)
487-49-0P 2284-30-2P 13004-42-7P 19337-03-2P 22877-01-6P
23504-03-2P
             29048-54-2P 90110-32-0P 103620-87-7P 130307-08-3P
140660-31-7P
              328018-52-6P
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747412-81-3P 747412-82-4P 747412-94-8P 747413-00-9P
747413-03-2P
              747413-04-3P
                             747413-05-4P
                                            747413-06-5P
                                                           747413-07-6P
                                            747413-18-9P
                                                           747413-19-0P
747413-12-3P
              747413-16-7P
                             747413-17-8P
747413-21-4P
              747413-22-5P
                             747413-23-6P
                                            747413-31-6P
                                                           747413-33-8P
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747413-34-9P 747413-35-0P 747413-68-9P 747413-69-0P 747413-70-3P 747413-71-4P 747413-72-5P 747413-73-6P 747413-74-7P 747413-75-8P 747414-06-8P 747414-07-9P 747414-08-0P 747414-09-1P 747414-10-4P 747414-11-5P 747414-12-6P 747414-16-0P 747414-17-1P 747414-18-2P 747414-22-8P 747414-19-3P 747414-20-6P 747414-21-7P 747414-23-9P 747414-49-9P 747414-51-3P 747414-24-0P 747414-48-8P 747414-50-2P 747414-52-4P 747414-53-5P 747414-55-7P 747414-56-8P 747414-57-9P 747414-63-7P 747414-64-8P 747414-65-9P 747414-66-0P 747414-62-6P 747414-67-1P 747414-69-3P 747414-70-6P 747414-71-7P 747414-72-8P 747414-73-9P 747414-74-0P 747414-76-2P 747414-78-4P 747414-79-5P 747414-80-8P 747414-84-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of isoxazoles as inhibitors of heat shock proteins)

T 747412-67-5P 747412-68-6P 747412-69-7P

747412-70-0P 747412-71-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(claimed compound: preparation of isoxazoles as inhibitors of heat shock proteins)

RN 747412-67-5 HCAPLUS

CN 3-Isoxazolecarboxamide. 4-[4-[(diethylamino)methyl]phenyl]-5-(4.6-dihydroxy-2'-methyl[1.1'-biphenyl]-3-yl)-N-ethyl- (9CI) (CA INDEX NAME)

RN 747412-68-6 HCAPLUS

CN 3-Isoxazolecarboxamide, 4-[4-[(diethylamino)methyl]phenyl]-N-ethyl-5-(4'-fluoro-4.6-dihydroxy[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

RN 747412-69-7 HCAPLUS

CN 3-Isoxazolecarboxamide, 4-[4-[(diethylamino)methyl]phenyl]-5-(4.6-dihydroxy[1.1'-biphenyl]-3-yl)-N-ethyl- (9CI) (CA INDEX NAME)

RN 747412-70-0 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(2'-fluoro-4,6-dihydroxy[1,1'-biphenyl]-3-yl)-4-[4-(1-pyrrolidinylmethyl)phenyl]- (9CI) (CA INDEX NAME)

RN 747412-71-1 HCAPLUS

CN 3-Isoxazolecarboxamide. 5-(4.6-dihydroxy[1,1'-biphenyl]-3-yl)-N-ethyl-4-[4-(4-morpholinylmethyl)phenyl]- (9CI) (CA INDEX NAME)

IT 747412-83-5P 747413-77-0P 747413-81-6P

747413-82-7P 747413-83-8P 747413-89-4P

747413-91-8P 747413-92-9P 747413-93-0P

747413-98-5P 747414-00-2P 747414-01-3P

747414-02-4P 747414-03-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation): USES (Uses)

(preparation of isoxazoles as inhibitors of heat shock proteins)

RN 747412-83-5 HCAPLUS

CN [1.1'-Biphenyl]-2.4-diol, 5-[4-(4-methoxyphenyl)-3-methyl-5-isoxazolyl]-(9CI) (CA INDEX NAME)

RN 747413-77-0 HCAPLUS

CN 3-Isoxazolecarboxamide. 5-(4.6-dihydroxy[1,1'-biphenyl]-3-yl)-N-ethyl-4-(4fluorophenyl)- (9CI) (CA INDEX NAME)

RN 747413-81-6 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(4'-fluoro-4.6-dihydroxy[1.1'-biphenyl]- 3-yl)-4-(4-fluorophenyl)- (9CI) (CA INDEX NAME)

N 747413-82-7 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(4'-fluoro-4,6-dihydroxy[1,1'-biphenyl]3-yl)-4-[4-(1-piperidinylmethyl)phenyl]-, monohydrochloride (9CI) (CA
INDEX NAME)

RN 747413-83-8 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(4'-fluoro-4,6-dihydroxy[1,1'-biphenyl]-3-yl)-4-[4-(4-morpholinylmethyl)phenyl]-, monohydrochloride (9CI) (CA INDEX NAME)

RN 747413-89-4 HCAPLUS

CN 3-Isoxazolecarboxamide. 5-(4.6-dihydroxy[1,1'-biphenyl]-3-yl)-N-ethyl-4-[4-(1-piperidinylmethyl)phenyl]-. monoacetate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 747413-88-3 CMF C30 H31 N3 O4

CM 2

CRN 64-19-7 CMF C2 H4 02

RN 747413-91-8 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(2'-fluoro-4.6-dihydroxy[1.1'-biphenyl]-3-yl)-4-[4-(1-piperidinylmethyl)phenyl]-, monohydrochloride (9CI) (CA INDEX NAME)

●HC1

RN 747413-92-9 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(2'-fluoro-4.6-dihydroxy[1,1'-biphenyl]-3-yl)-4-[4-(4-morpholinylmethyl)phenyl]-, monohydrochloride (9CI) (CA INDEX NAME)

●HC1

RN 747413-93-0 HCAPLUS

CN 3-Isoxazolecarboxamide. N-ethyl-5-(2'-fluoro-4.6-dihydroxy[1.1'-biphenyl]-3-yl)-4-[4-[(4-methyl-1-piperazinyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

RN 747413-98-5 HCAPLUS

CN 3-Isoxazolecarboxamide, 5-(4.6-dihydroxy-2'-methyl[1,1'-biphenyl]-3-yl)-N-ethyl-4-[4-(1-piperidinylmethyl)phenyl]- (9CI) (CA INDEX NAME)

RN 747414-00-2 HCAPLUS

CN 3-Isoxazolecarboxamide, N-ethyl-5-(4'-fluoro-4,6-dihydroxy[1,1'-biphenyl]-3-yl)-4-[4-[(4-methyl-1-piperazinyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

RN 747414-01-3 HCAPLUS

CN 3-Isoxazolecarboxamide. 4-[4-[(diethylamino)methyl]phenyl]-N-ethyl-5-(4'-fluoro-4.6-dihydroxy[1.1'-biphenyl]-3-yl)-, monohydrochloride (9CI) (CA INDEX NAME)

●HC1

RN 747414-02-4 HCAPLUS

CN 3-Isoxazolecarboxamide, 5-(4,6-dihydroxy-2'-methyl[1,1'-biphenyl]-3-yl)-N-ethyl-4-[4-[(4-methyl-1-piperazinyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

RN 747414-03-5 HCAPLUS

●HC1

IT 747412-82-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of isoxazoles as inhibitors of heat shock proteins)

RN 747412-82-4 HCAPLUS

CN Isoxazole. 5-[4.6-bis(phenylmethoxy)[1.1'-biphenyl]-3-yl]-4-(4methoxyphenyl)-3-methyl- (9CI) (CA INDEX NAME)

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MeO Ph O- CH2- Ph
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L17 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
    2002:814125 HCAPLUS
DN
    137:325438
    Entered STN: 25 Oct 2002
ED
    Preparation of dihydro-benzo[b][1.4]diazepin-2-one derivatives as
    metabotropic glutamate receptor 2 (mGluR2) antagonists
IN
    Adam, Geo; Goetschi, Erwin; Mutel, Vincent; Wichmann, Juergen; Woltering,
    Thomas Johannes
PΑ
    F. Hoffmann-La Roche AG. Switz.
S0
    PCT Int. Appl., 116 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
IC
    ICM C07D403-10
    ICS A61K031-5513; C07D401-04; C07D403-14; C07D417-10; A61P025-00
    28-21 (Heterocyclic Compounds (More Than One Hetero Atom))
    Section cross-reference(s): 1
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    PATENT NO.
                        KIND
                              DATE
                                           APPLICATION NO.
                                                                 DATE
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    WO 2002083665
                        A1
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                                          WO 2002-EP3643
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            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
            LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
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CLASS
PATENT NO.
                CLASS PATENT FAMILY CLASSIFICATION CODES
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WO 2002083665
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OS MARPAT 137:325438

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$$R^1$$
 R^2
 R^3

This invention is concerned with dihydro-benzo[b][1,4]diazepin-2-one derivs. of general formula [I: R1 = cyano, each (un)substituted fluoro-lower alkyl, lower alkoxy, fluoro-lower alkoxy, or is pyrrol-1-yl: R2 = H, if R1 is optionally substituted pyrrol-1-yl as defined above, or R2 = halogen, H0, lower alkyl, fluoro-lower alkyl, lower alkoxy. hydroxymethyl, hydroxyethoxy, lower alkoxy(ethoxy)n (n = 1-4), lower alkoxymethyl, cyanomethoxy, morpholin-4-yl, thiomorpholin-4-yl, 1-oxothiomorpholin-4-yl, 1.1-dioxothiomorpholin-4-yl, 4-oxopiperidin-1-yl 4-alkoxypiperidin-1-yl, 4-hydroxypiperidin-1-yl, 4-hydroxypiperidin-1-yl, 4-lower alkylpiperazin-1-yl, alkoxycarbonyl, 2dialkylaminoethylsulfanyl, N.N-bis(lower alkyl)amino-lower alkyl, carbamoylmethyl, etc.; Y = CH, N; R3 = halogen, lower alkyl, fluoro-lower alkyl, lower alkoxy, cyano, -(CH2)nCO-OR''-(CH2)n-CO-NR'R' (un)substituted five-membered aromatic heterocycle; R' = H, lower alkyl, C3-6-cycloalkyl, fluoro-lower alkyl or 2-lower alkoxy-lower alkyl; R" = H, lower alkyl, C3-6-cycloalkyl, fluoro-lower alkyl, 2-lower alkoxy lower alkyl. -(CH2)2-4-di-lower alkylamino. -(CH2)2-4-morpholinyl. -(CH2)2-4-pyrrolidinyl, -(CH2)2-4-piperidinyl, 3-hydroxy-lower alkyl; n = 0-4] and their pharmaceutically acceptable addition salts. The invention further relates to medicaments containing these compds. and a process for their preparation as well as their use for preparation of medicaments for the treatment or prevention of acute and/or chronic neurol. disorders including psychosis, schizophrenia, Alzheimer's disease, cognitive disorders and memory deficits. Thus, a mixture of (2-amino-5-thiomorpholin-4-yl-4-trifluoromethylphenyl)carbamic acid tert-Bu ester and 3-(2-cyanopyridin-4-yl)-3-oxopropionic acid tert-Bu ester in toluene was heated to 80-120.degree. to give [2-[3-(2-cyanopyridin-4-yl)-3oxopropionylamino]-5-thiomorpholin-4-y1-4-trifluoromethylphenyl]carbamic acid tert-Bu ester which was treated with CF3CO2H in CH2C12 to give 4-(4-0xo-8-thiomorpholin-4-yl-7-trifluoromethyl-4,5-dihydro-3Hbenzo[b][1,4]diazepin-2-yl)pyridine-2-carbonitrile (II). II in vitro inhibited the [3H]-LY354740 binding on mGluR2 transfected CHO cell membranes with Ki of 0.0009 .mu.M.

dihydrobenzodiazepin prepn metabotropic glutamate receptor 2 antagonist; mGluR2 antagonist dihydrobenzodiazepin prepn; neurol disorder treatment prevention dihydrobenzodiazepin prepn; psychosis schizophrenia Alzheimer disease treatment prevention dihydrobenzodiazepin prepn; cognitive disorder memory deficit treatment prevention dihydrobenzodiazepin prepn

IT Mental disorder

(cognitive: preparation of dihydro-benzo[b][1.4]diazepinone derivs. as metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment or prevention of acute and/or chronic neurol. disorders)

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(disorder: preparation of dihydro-benzo[b][1.4]diazepinone derivs. as
       metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment or
       prevention of acute and/or chronic neurol. disorders)
    Glutamate receptors
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (metabotropic, mGluR2; preparation of dihydro-benzo[b][1,4]diazepinone
       derivs, as metabotropic glutamate receptor 2 (mGluR2) antagonists for
       treatment or prevention of acute and/or chronic neurol. disorders)
IT Alzheimer's disease
    Anti-Alzheimer's agents
    Antipsychotics
    Nervous system, disease
    Schizophrenia
        (preparation of dihydro-benzo[b][1,4]diazepinone derivs. as metabotropic
       glutamate receptor 2 (mGluR2) antagonists for treatment or prevention
       of acute and/or chronic neurol. disorders)
    Mental disorder
        (psychosis; preparation of dihydro-benzo[b][1.4]diazepinone derivs. as
       metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment or
       prevention of acute and/or chronic neurol. disorders)
IT
    Memory, biological
       (retention defect; preparation of dihydro-benzo[b][1,4]diazepinone derivs.
       as metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment
       or prevention of acute and/or chronic neurol. disorders)
    473538-96-4P, 3-(4-0xo-7-(pyrrol-1-yl)-4,5-dihydro-3H-
    benzo[b][1.4]diazepin-2-v])benzonitrile 473538-99-7P.
    4-(3-Iodophenyl)-8-pyrrol-1-yl-1.3-dihydrobenzo[b][1.4]diazepin-2-one
    473539-11-6P, 2-[3-[4-0xo-7-pyrrol-1-yl-4,5-dihydro-3H-
    benzo[b][1,4]diazepin-2-yl]phenyl]thiazole-4-carboxylic acid ethyl ester
    473539-16-1P. 5-[3-[4-0xo-7-pyrrol-1-y]-4.5-dihydro-3H-
    benzo[b][1.4]diazepin-2-yl]phenyl]oxazole-4-carboxylic acid ethyl ester
     473539-18-3P, 2-[3-(4-0xo-7-(pyrrol-1-yl)-4.5-dihydro-3H-
    benzo[b][1,4]diazepin-2-yl)phenyl]oxazole-4-carboxylic acid methyl ester
     473539-19-4P, 4-[3-(4-Hydroxymethyloxazol-2-yl)phenyl]-8-pyrrol-1-yl-1,3-
    dihydrobenzo[b][1,4]diazepin-2-one 473539-21-8P.
    4-[3-[4-0xo-7-pyrrol-1-yl-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-
    yl]phenyl]thiazole-2-carboxylic acid ethyl ester 473539-41-2P.
     4-[3-(5-Hydroxymethy]-[1.2.3]triazol-1-yl)phenyl]-7-methoxy-8-
    trifluoromethyl-1, 3-dihydrobenzo[b][1,4] diazepin-2-one \\ 473539-47-8P.
    7-Ethoxy-4-[3-(5-hydroxymethy]-[1.2.3]triazol-1-y])pheny]-8-
     trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473539-58-1P,
    7-Chloro-4-[3-(5-hydroxymethyl-[1.2.3]triazol-1-yl)phenyl]-8-
    trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473539-59-2P.
    7-Chloro-4-[3-(5-hydroxymethyl-[1,2,4]triazol-1-yl)phenyl]-8-
    trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473539-63-8P.
     4-[3-(5-Hydroxymethyl-[1,2,3]triazol-1-yl)phenyl]-7-methyl-8-
     trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one
     RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); RACT (Reactant or reagent); USES (Uses)
        (intermediate; preparation of dihydro-benzo[b][1,4]diazepin-2-one derivs. as
       metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment
       and/or prevention of acute and/or chronic neurol. disorders)
    1087-21-4P. Isophthalic acid diallyl ester 46425-21-2P. Isophthalic acid
                     53503-61-0P. tert-Butyl lithioacetate
                                                              59896-23-0P.
    monoallyl ester
     3-Chlorocarbonylbenzoic acid allyl ester 335255-81-7P.
     3-0xo-3-(3-([1,2,3]triazol-1-yl)phenyl)propionic acid ethyl ester
     335255-82-8P, 3-[1,2,3]Triazol-1-ylbenzoic acid 335255-83-9P.
     3-(3-Cyanophenyl)-3-oxopropionic acid tert-butyl ester 335255-84-0P
     335255-85-1P. Methyl 3-(1H-imidazol-1-yl)benzoate 335255-88-4P.
     3-Oxo-3-(3-([1,2,4]triazol-1-yl)phenyl)propionic acid tert-butyl ester
     335255-95-3P 335256-03-6P, 3-[3-(3-Methylisoxazol-5-yl)phenyl]-3-
     oxopropionic acid tert-butyl ester 335256-24-1P. 3-(2.2-Dimethyl-6-oxo-
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IT

Cognition

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6H-[1,3]dioxin-4-yl)benzonitrile 335256-25-2P
                                                 335256-29-6P.
6-(3-Iodophenyl)-2.2-dimethyl-[1.3]dioxin-4-one
                                                 335256-30-9P
335256-34-3P, 6-(3-(Imidazol-1-yl)phenyl)-2,2-dimethyl-[1,3]dioxin-4-one
335256-35-4P. 3-(3-Imidazol-1-ylphenyl)-3-oxopropionic acid
335256-44-5P. 4-(2.2-Dimethyl-6-oxo-6H-[1.3]dioxin-4-yl)pyridine-2-
carbonitrile 335349-73-0P. (5-Cyanomethyl-4-iodo-2-nitrophenyl)carbamic
acid tert-butyl ester 335349-74-1P, (5-Amino-2-iodo-4-
nitrophenyl)acetonitrile 428871-73-2P. 5-Fluoro-2-nitro-4-
trifluoromethylphenylamine 454464-55-2P, Methyl 3-(2-
bromopropionyl)benzoate 473537-10-9P, (5-Fluoro-2-nitro-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-14-3P.
(2-Nitro-4-(pyrrol-1-yl)phenyl)carbamic acid tert-butyl ester
473537-16-5P, 2-Nitro-4-(pyrrol-1-yl)phenylamine 473537-18-7P.
[5-(2-Methoxyethoxy)-2-nitro-4-(pyrrol-1-yl)phenyl]carbamic acid
tert-butyl ester 473537-20-1P, 5-(2-Methoxyethoxy)-2-nitro-4-(pyrrol-1-
yl)phenylamine 473537-22-3P. (5-Methoxy-2-nitro-4-(pyrrol-1-
yl)phenyl)carbamic acid tert-butyl ester 473537-24-5P.
5-Methoxy-2-nitro-4-(pyrrol-1-yl)phenylamine 473537-26-7P.
[4-(2-tert-Butylpyrrol-1-yl)-5-methoxy-2-nitrophenyl]carbamic acid
tert-butyl ester 473537-31-4P, (5-Methoxy-2-nitro-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-32-5P.
5-Methoxy-2-nitro-4-trifluoromethylphenylamine 473537-34-7P.
(5-Ethoxy-2-nitro-4-trifluoromethylphenyl)carbamic acid tert-butyl ester
473537-36-9P. 5-Ethoxy-2-nitro-4-trifluoromethylphenylamine
473537-38-1P. (4-Cyano-5-fluoro-2-nitrophenyl)carbamic acid tert-butyl
      473537-41-6P. (5-Chloro-2-nitro-4-trifluoromethylphenyl)carbamic
acid tert-butyl ester 473537-43-8P, (5-(Morpholin-4-yl)-2-nitro-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-45-0P
473537-47-2P. (4-Cyano-5-(morpholin-4-yl)-2-nitrophenyl)carbamic acid
tert-butyl ester 473537-48-3P 473537-49-4P. (5-Methyl-2-nitro-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-50-7P.
5-Chloro-2-nitro-4-(pyrrol-1-yl)phenylamine 473537-51-8P,
2-Nitro-5-(pyrrol-1-yl)phenylamine 473537-52-9P, 1-(3-Amino-4-
nitrophenyl)-4-(2-chlorophenyl)-1H-pyrrole-3-carbonitrile 473537-53-0P.
1-(3-Amino-4-nitrophenyl)-4-phenyl-1H-pyrrole-3-carbonitrile
473537-55-2P, 4-Iodo-2-nitro-5-(pyrrol-1-yl)phenylamine 473537-56-3P.
N-(5-Amino-4-iodo-2-nitrophenyl)acetamide 473537-57-4P.
1-(3-Amino-4-nitrophenyl)-1H-pyrrole-3-carboxaldehyde 473537-58-5P.
[1-(3-Amino-4-nitrophenyl)-1H-pyrrol-3-yl]methanol 473537-59-6P,
2-Nitro-5-(3-phenylpyrrol-1-yl)phenylamine 473537-60-9P 473537-61-0P.
2.5-Dimethoxy-3-methoxymethyltetrahydrofuran 473537-62-1P
473537-63-2P, 1-(3-Amino-4-nitrophenyl)-1H-pyrrole-2-carboxylic acid
methyl ester 473537-64-3P, (2-Amino-5-(morpholin-4-yl)-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-65-4P.
(2-Amino-4-(pyrrol-1-yl)phenyl)carbamic acid tert-butyl ester
473537-66-5P. [2-Amino-5-(2-methoxyethoxy)-4-(pyrrol-1-yl)phenyl]carbamic
acid tert-butyl ester 473537-67-6P. (2-Amino-5-methoxy-4-(pyrrol-1-
yl)phenyl)carbamic acid tert-butyl ester 473537-68-7P.
[2-Amino-4-(2-tert-butylpyrrol-1-yl)-5-methoxyphenyl]carbamic acid
tert-butyl ester 473537-69-8P. (2-Amino-5-cyanomethyl-4-
iodophenyl)carbamic acid tert-butyl ester 473537-70-1P 473537-71-2P.
[2-Amino-5-(1,1-dioxo-thiomorpholin-4-yl)-4-trifluoromethylphenyl]carbamic
acid tert-butyl ester 473537-72-3P, [5-(1.1-Dioxo-thiomorpholin-4-yl)-2-
nitro-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
473537-73-4P. (2-Amino-5-methoxy-4-trifluoromethylphenyl)carbamic acid
tert-butyl ester 473537-74-5P, (2-Amino-5-fluoro-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-75-6P.
(2-Amino-5-ethoxy-4-trifluoromethylphenyl)carbamic acid tert-butyl ester
473537-76-7P. (2-Amino-4-cyano-5-(morpholin-4-yl)phenyl)carbamic acid
tert-butyl ester 473537-77-8P 473537-78-9P, (2-Amino-5-chloro-4-
trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-79-0P.
(2-Amino-5-methyl-4-trifluoromethylphenyl)carbamic acid tert-butyl ester
473537-80-3P 473537-81-4P 473537-82-5P 473537-83-6P.
2-(3-Methylisoxazol-5-yl)isonicotinic acid methyl ester 473537-84-7P
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473537-85-8P. 3-(2-Methyl-2H-pyrazol-3-yl)benzoic acid methyl ester 473537-86-9P, 3-[3-(5-Dimethylaminomethyl-[1,2,3]triazol-1-yl)phenyl]-3oxopropionic acid tert-butyl ester 473537-87-0P. 3-(5-((Dimethylamino)methyl)-[1.2.3]triazol-1-yl)benzoic acid methyl ester 473537-88-1P. 3-[3-(3-Methoxymethylisoxazol-5-yl)phenyl]-3-oxopropionic acid tert-butyl ester 473537-89-2P, Methyl 3-(3-methoxymethylisoxazol-5vl)benzoate 473537-90-5P 473537-91-6P 473537-93-8P 473537-94-9P 473537-95-0P. (RS)-3-0xo-3-[3-[5-((tetrahydropyran-2-yloxy)methyl)isoxazol-3-yl]phenyl]propionic acid tert-butyl ester 473537-96-1P. (RS)-3-[5-((Tetrahydropyran-2-yloxy)methyl)isoxazol-3-yl]benzoic acid methyl ester 473537-97-2P. 3-0xo-3-(3-(pyrazol-1-yl)phenyl)propionic acid tert-butyl ester 473537-98-3P. 3-0xo-3-(3-([1.2.3]triazol-1yl)phenyl)propionic acid tert-butyl ester 473537-99-4P 473538-00-0P 473538-01-1P 473538-02-2P 473538-03-3P, 3-0xo-3-[3-(5-methyloxazol-4yl)phenyl]propionic acid tert-butyl ester 473538-04-4P. Methyl 3-(5-methyloxazol-4-yl)benzoate 473538-05-5P 473538-06-6P. Methyl 3-(2-hydroxymethyl-5-methylthiazol-4-yl)benzoate 473538-07-7P, Methyl 3-[5-methyl-2-((tetrahydropyran-2-yloxy)methyl)thiazol-4-yl]benzoate 473538-08-8P, 3-0xo-3-[3-[5-methyl-2-((tetrahydropyran-2yloxy)methyl)thiazol-4-yl]phenyl]propionic acid tert-butyl ester 473538-09-9P, 3-0xo-3-[3-[4-((tetrahydropyran-2-yloxy)methyl)thiazol-2yl]phenyl]propionic acid tert-butyl ester 473538-10-2P. 3-(4-Hydroxymethylthiazol-2-yl)benzoic acid methyl ester 473538-11-3P. 3-[4-((Tetrahydropyran-2-yloxy)methyl)thiazol-2-yl]benzoic acid methyl ester 473538-12-4P. 2,2-Dimethyl-6-(3-oxazol-2-ylphenyl)-[1,3]dioxin-4one 473538-13-5P, 3-(3-0xazol-2-ylphenyl)-3-oxopropionic acid 473538-14-6P, 3-(0xazol-2-yl)benzoyl chloride 473538-15-7P. 3-[N-(2,2-Dimethoxyethyl)aminocarbonyl]benzoic acid methyl ester 473538-16-8P. 3-[N-(2-0xoethyl)aminocarbonyl]benzoic acid methyl ester 473538-17-9P, 3-(0xazol-2-yl)benzoic acid methyl ester 473538-18-0P, 3-(0xazol-2-yl)benzoic acid 473538-20-4P, 5-[3-(2,2-Dimethyl-6-oxo-6H-[1,3]dioxin-4-yl)phenyl]oxazole-4-carboxylic acid ethyl ester 473538-22-6P, 5-(3-Carboxyacetylphenyl)oxazole-4-carboxylic acid ethyl ester 473538-23-7P, 5-(3-Chlorocarbonylphenyl)oxazole-4-carboxylic acid ethyl ester 473538-24-8P, 5-(3-Allyloxycarbonylphenyl)oxazole-4carboxylic acid ethyl ester carboxylic acid ethyl ester 473538-25-9P. 5-(3-Carboxyphenyl)oxazole-4-473538-26-0P. 2-[3-(2.2-Dimethyl-6-oxo-6H-[1.3]dioxin-4-yl)phenyl]oxazole-4-carboxylic acid methyl ester 473538-27-1P. 2-(3-Carboxyacety)phenyl)oxazole-4-carboxylic acid methyl 473538-28-2P. 2-(3-Chlorocarbonylphenyl)oxazole-4-carboxylic acid methyl ester 473538-29-3P 473538-30-6P. (S)-2-(3-Allyloxycarbonylphenyl)-4.5-dihydrooxazole-4-carboxylic acid methyl ester 473538-31-7P, 2-(3-Allyloxycarbonylphenyl)oxazole-4-carboxylic acid methyl 473538-32-8P, 2-(3-Carboxyphenyl)oxazole-4-carboxylic acid methyl ester 473538-33-9P, 4-[3-(2,2-Dimethyl-6-oxo-6H-[1,3]dioxin-4vl)phenvl]thiazole-2-carboxylic acid ethyl ester 473538-34-0P. 4-(3-Carboxyacetylphenyl)thiazole-2-carboxylic acid ethyl ester 473538-35-1P, 4-(3-Chlorocarbonylphenyl)thiazole-2-carboxylic acid ethyl 473538-36-2P, 4-(3-Carboxyphenyl)thiazole-2-carboxylic acid ethyl 473538-37-3P 473538-38-4P 473538-39-5P, [2-[[3-(2-Cyanopyridin-4-yl)-3-oxopropionyl]amino]-5-(morpholin-4-yl)-4trifluoromethylphenyl]carbamic acid tert-butyl ester 473538-40-8P , [2-[[3-[3-(3-Methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5morpholin-4-yl-4-trifluoromethylphenyl]carbamic acid tert-butyl ester 473538-41-9P 473538-42-0P. [2-[[3-(3-Cyanophenyl)-3-oxopropionyl]amino]-4-(pyrrol-1-yl)phenyl]carbamic acid tert-butyl ester 473538-43-1P. N-[5-[3-(2-Chlorophenyl)-4-cyano-pyrrol-1-yl]-2-nitrophenyl]-3-(3cyanophenyl)-3-oxopropionamide 473538-44-2P. 3-(3-Cyanophenyl)-N-[5-(3cyano-4-phenylpyrrol-1-yl)-2-nitrophenyl]-3-oxopropionamide 473538-45-3P, 3-(3-Iodophenyl)-N-(2-nitro-4-(pyrrol-1-yl)phenyl)-3oxopropionamide 473538-46-4P, 3-(3-Cyanophenyl)-N-(4-iodo-2-nitro-5-(pyrrol-1-yl)phenyl)-3-oxopropionamide 473538-47-5P. [2-[[3-(3-Cyanophenyl)-3-oxopropionyl]amino]-5-(2-methoxyethoxy)-4-(pyrrol-1-yl)phenyl]carbamic acid tert-butyl ester 473538-48-6P.

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3-(3-Cyanophenyl)-N-[5-(3-hydroxymethylpyrrol-1-yl)-2-nitrophenyl]-3-
oxopropionamide 473538-49-7P, 3-(3-Cyanophenyl)-N-[2-nitro-5-(3-
phenylpyrrol-1-yl)phenyl]-3-oxopropionamide 473538-50-0P.
3-(3-Cyanophenyl)-N-[5-(3-methoxymethylpyrrol-1-yl)-2-nitrophenyl]-3-
oxopropionamide 473538-51-1P. 3-(3-Cyanophenyl)-N-[5-(2-
methoxymethylpyrrol-1-yl)-2-nitrophenyl]-3-oxopropionamide 473538-52-2P.
1-[3-[[3-(3-Cyanophenyl)-3-oxopropionyl]amino]-4-nitrophenyl]-1H-pyrrole-2-
carboxylic acid methyl ester 473538-53-3P, 3-(3-(Imidazol-1-yl)phenyl)-N-
(2-nitro-5-(pyrrol-1-yl)phenyl)-3-oxopropionamide 473538-54-4P.
[2-[[3-(3-(Imidazol-1-yl)phenyl)-3-oxopropionyl]amino]-4-(pyrrol-1-
yl)phenyl]carbamic acid tert-butyl ester 473538-55-5P.
[2-[[3-(3-Cyanopheny])-3-oxopropiony]]amino]-5-methoxy-4-(pyrrol-1-
yl)phenyl]carbamic acid tert-butyl ester 473538-56-6P.
[4-(2-tert-Butylpyrrol-1-yl)-2-[[3-(3-cyanophenyl)-3-oxopropionyl]amino]-5-
methoxyphenyl]carbamic acid tert-butyl ester 473538-57-7P.
[2-[[3-0xo-3-(3-([1,2,3]triazo]-1-y])pheny])propiony]]amino]-4-(pyrrol-1-y)pheny])propiony]
yl)phenyl]carbamic acid tert-butyl ester 473538-58-8P.
[5-Cyanomethyl-2-[[3-(3-(imidazol-1-yl)phenyl)-3-oxopropionyl]amino]-4-
iodophenyl]carbamic acid tert-butyl ester 473538-59-9P.
[2-[[3-[3-(2-Methyl-2H-pyrazol-3-yl)phenyl]-3-oxopropionyl]amino]-5-
(morpholin-4-yl)-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
473538-60-2P 473538-61-3P, [2-[[3-[3-(5-((Dimethylamino)methyl)-
[1,2,3]triazol-1-yl)phenyl]-3-oxopropionyl]amino]-5-(morpholin-4-yl)-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473538-62-4P
. [2-[[3-[3-(3-Methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-
thiomorpholin-4-yl-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
473538-63-5P. [2-[[3-(2-Cyano-pyridin-4-yl)-3-oxopropionyl]amino]-5-
thiomorpholin-4-yl-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
473538-64-6P 473538-65-7P. [2-[[3-(2-Cyano-pyridin-4-yl)-3-
oxopropionyl]amino]-5-methoxy-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-66-8P, [5-Methoxy-2-[[3-[3-(3-
methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473538-67-9P
473538-68-0P 473538-69-1P, [5-(Morpholin-4-yl)-2-[[3-oxo-3-(3-(pyrazol-1-
yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-70-4P, [5-(Morpholin-4-yl)-2-[[3-oxo-3-(3-(4H-
[1.2.4]triazol-4-yl)phenyl)propionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473538-71-5P
473538-72-6P 473538-73-7P, [2-[[3-(2-Cyano-pyridin-4-yl)-3-
oxopropionyl]amino]-5-ethoxy-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-74-8P. [5-Ethoxy-2-[[3-oxo-3-(3-([1.2.3]triazol-
1-yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-75-9P, [5-Methoxy-2-[[3-oxo-3-(3-([1.2.3]triazol-
1-yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-76-0P, [2-[[3-(2-Cyano-pyridin-4-yl)-3-
oxopropionyl]amino]-5-methyl-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-77-1P, [5-Cyano-2-[[3-(3-cyanophenyl)-3-
oxopropionyl]amino]-4-(morpholin-4-yl)phenyl]carbamic acid tert-butyl
       473538-78-2P 473538-79-3P, [4-Cyano-2-[[3-[3-(3-
methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-(morpholin-4-
yl)phenyl]carbamic acid tert-butyl ester 473538-80-6P
473538-81-7P, [5-Chloro-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
473538-83-9P 473538-84-0P. [5-Methyl-2-[[3-[3-(3-methylisoxazol-
5-yl)phenyl]-3-oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester · 473538-85-1P, [5-Chloro-2-[[3-oxo-3-(3-([1.2.4]triazol-
1-yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-86-2P, [5-Chloro-2-[[3-(3-(imidazol-1-yl)phenyl)-
3-oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid tert-butyl
ester 473538-87-3P. [5-Chloro-2-[[3-oxo-3-(3-([1,2,3]triazol-1-
yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-88-4P. [5-Methyl-2-[[3-oxo-3-(3-([1.2.4]triazol-
1-yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-89-5P. [5-Methyl-2-[[3-(3-(imidazol-1-yl)phenyl)-
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3-oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid tert-butyl
        473538-90-8P, [5-Methy]-2-[[3-oxo-3-(3-([1.2.3]triazol-1-
yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-91-9P. [5-Methyl-2-[[3-oxo-3-(3-(pyrazol-1-
yl)phenyl)propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473538-92-0P 473539-12-7P, 3-[4-0xo-7-pyrrol-1-yl-4.5-
dihydro-3H-benzo[b][1,4]diazepin-2-yl]thiobenzamide 473539-22-9P.
5-[3-(2.2-Dimethyl-6-oxo-6H-[1.3]dioxin-4-yl)phenyl]thiazole-2-carboxylic
acid ethyl ester 473539-30-9P. 4-[3-[4-(Chloromethyl)thiazol-2-
yl]phenyl]-8-pyrrol-1-yl-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473539-74-1P, 4-[3-(4-Chloromethyloxazol-2-yl)phenyl]-8-pyrrol-1-yl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
   (intermediate; preparation of dihydro-benzo[b][1.4]diazepin-2-one derivs. as
   metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment
   and/or prevention of acute and/or chronic neurol. disorders)
473538-93-1P. 4-[3-(5-Hydroxymethyl-[1,2,3]triazol-1-yl)phenyl]-7-
morpholin-4-yl-8-trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473538-94-2P, 4-(8-(Morpholin-4-yl)-4-oxo-7-trifluoromethyl-4,5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl)pyridine-2-carbonitrile 473538-95-3P.
4-[3-(3-Methylisoxazol-5-yl)phenyl]-7-morpholin-4-yl-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473538-97-5P, 4-(2-Chlorophenyl)-1-[2-
(3-cyanophenyl)-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepin-7-yl]-1H-
pyrrole-3-carbonitrile 473538-98-6P, 1-[2-(3-Cyanophenyl)-4-oxo-4.5-
dihydro-3H-benzo[b][1,4]diazepin-7-yl]-4-phenyl-1H-pyrrole-3-carbonitrile
473539-00-3P, 3-(4-0xo-7-(pyrrol-1-yl)-4.5-dihydro-3H-
benzo[b][1,4]diazepin-2-y1)benzamide 473539-01-4P, 3-(8-Iodo-4-oxo-7-
(pyrrol-1-yl)-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)benzonitrile
473539-02-5P, 3-(8-(2-Methoxyethoxy)-4-oxo-7-(pyrrol-1-yl)-4,5-dihydro-3H-
benzo[b][1,4]diazepin-2-yl)benzonitrile 473539-03-6P.
3-(7-(3-Hydroxymethylpyrrol-1-yl)-4-oxo-4,5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl)benzonitrile 473539-04-7P.
3-(4-0xo-7-(3-pheny)pyrrol-1-yl)-4.5-dihydro-3H-benzo[b][1,4]diazepin-2-
yl)benzonitrile 473539-05-8P, 3-(7-(3-Methoxymethylpyrrol-1-yl)-4-oxo-
4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)benzonitrile 473539-06-9P.
3-[7-(2-Methoxymethylpyrrol-1-yl)-4-oxo-4.5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl]benzonitrile 473539-07-0P.
1-[2-(3-Cyanopheny1)-4-oxo-4,5-dihydro-3H-benzo[b][1,4]diazepin-7-yl]-1H-
pyrrole-2-carboxylic acid methyl ester 473539-08-1P,
4-(3-(Imidazol-1-yl)phenyl)-8-(pyrrol-1-yl)-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-09-2P, 3-(8-Methoxy-4-oxo-7-
(pyrrol-1-yl)-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)benzonitrile
473539-10-5P, 3-(7-(2-tert-Butylpyrrol-1-yl)-8-methoxy-4-oxo-4.5-dihydro-
3H-benzo[b][1,4]diazepin-2-yl)benzonitrile 473539-13-8P,
4-[3-(4-Hydroxymethylthiazol-2-yl)phenyl]-8-pyrrol-1-yl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-14-9P, 8-(Pyrrol-1-yl)-4-(3-
([1.2.3]triazol-1-yl)phenyl)-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473539-15-0P, 4-(3-(0xazol-2-yl)phenyl)-8-pyrrol-1-yl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-17-2P, 5-[3-(4-0xo-7-(pyrrol-1-
yl)-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)phenyl]oxazole-4-carboxylic
acid-N-(2-hydroxyethyl)amide 473539-20-7P, 2-[3-(4-0xo-7-(pyrrol-1-yl)-
4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)phenyl]oxazole-4-carboxylic acid
      473539-23-0P, 4-[3-(3-Methylisoxazol-5-yl)phenyl]-8-pyrrol-1-yl-
1.3-dihydrobenzo[b][1.4]diazepin-2-one 473539-24-1P.
4-[3-(4-0xo-7-(pyrrol-1-yl)-4,5-dihydro-3H-benzo[b][1,4]diazepin-2-
yl)phenyl]thiazole-2-carboxylic acid amide 473539-25-2P.
2-[3-[4-0xo-7-pyrro]-1-y]-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-
yl]phenyl]oxazole-4-carboxylic acid bis(2-hydroxyethyl)amide
473539-26-3P. 4-[3-(4-0xo-7-(pyrrol-1-yl)-4.5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl)phenyl]thiazole-2-carboxylic acid
N-(2-hydroxyethyl)amide 473539-27-4P, 4-[3-(2-Hydroxymethylthiazol-4-
yl)phenyl]-8-pyrrol-1-yl-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473539-28-5P. 2-[3-(4-0xo-7-(pyrrol-1-yl)-4.5-dihydro-3H-
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benzo[b][1,4]diazepin-2-yl)phenyl]oxazole-4-carboxylic acid
N-(2-hydroxyethyl)amide 473539-29-6P. 4-[3-[4-
((Dimethylamino)methyl)thiazol-2-yl]phenyl]-8-pyrrol-1-yl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-31-0P, 4-[3-(4-Morpholin-4-
ylmethylthiazol-2-yl)phenyl]-8-pyrrol-1-yl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-32-1P. [4-(3-(Imidazol-1-
yl)phenyl)-8-iodo-2-oxo-2,3-dihydro-1H-benzo[b][1,4]diazepin-7-
yl]acetonitrile 473539-33-2P, 4-[3-(2-Methyl-2H-pyrazol-3-yl)phenyl]-7-
morpholin-4-yl-8-trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473539-34-3P. 4-[3-(3-Hydroxymethylisoxazol-5-yl)phenyl]-7-morpholin-4-yl-
8-trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one 473539-35-4P.
4-[3-(5-((Dimethylamino)methyl)-[1.2.3]triazol-1-yl)phenyl]-7-morpholin-4-
y1-8-trifluoromethy1-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473539-36-5P, 4-[3-(3-Methylisoxazol-5-yl)phenyl]-7-thiomorpholin-4-yl-8-
trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473539-37-6P
473539-38-7P, 7-(1,1-Dioxo-thiomorpholin-4-yl)-4-[3-(5-hydroxymethyl-
[1.2.3]triazol-1-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-39-8P, 4-(8-Methoxy-4-oxo-7-
trifluoromethyl-4.5-dihydro-3H-benzo[b][1,4]diazepin-2-yl)pyridine-2-
carbonitrile 473539-40-1P, 7-Methoxy-4-[3-(3-methylisoxazol-5-yl)phenyl]-
8-trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473539-42-3P.
7-Methoxy-4-[3-[5-pyrrolidin-1-y]methyl-[1.2,3]triazol-1-yl]phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473539-43-4P.
4-[3-(5-Hydroxymethylisoxazol-3-yl)phenyl]-7-morpholin-4-yl-8-
trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473539-44-5P.
7-(Morpholin-4-yl)-4-(3-(pyrazol-1-yl)phenyl)-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-45-6P, 7-(Morpholin-4-yl)-4-(3-
(4H-1,2,4-triazol-4-yl)phenyl)-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-46-7P, 7-Fluoro-4-[3-[5-
hydroxymethyl-[1,2,3]triazol-1-yl]phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-48-9P, 4-[8-Ethoxy-4-oxo-7-
trifluoromethyl-4.5-dihydro-3H-benzo[b][1,4]diazepin-2-yl]pyridine-2-
carbonitrile 473539-49-0P. 4-[3-(5-((Cyclopropylamino)methyl)-
[1,2,3]triazol-1-yl)phenyl]-7-ethoxy-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-50-3P, 7-Ethoxy-4-[3-(5-
[(2,2,2-trifluoroethylamino)methyl]-[1,2,3]triazol-1-yl)phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473539-51-4P.
7-Ethoxy-4-(3-([1,2,3]triazol-1-yl)phenyl)-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-52-5P 473539-53-6P.
4-(8-Methyl-4-oxo-7-trifluoromethyl-4,5-dihydro-3H-benzo[b][1,4]diazepin-2-
yl)pyridine-2-carbonitrile 473539-54-7P, 2-(3-Cyanophenyl)-8-morpholin-4-
yl-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepine-7-carbonitrile
473539-55-8P, 2-[3-(5-Hydroxymethyl-[1,2,3]triazol-1-yl)phenyl]-8-
morpholin-4-yl-4-oxo-4,5-dihydro-3H-benzo[b][1,4]diazepine-7-carbonitrile
473539-56-9P, 2-[3-(3-Methylisoxazol-5-yl)phenyl]-8-morpholin-4-yl-4-oxo-
4,5-dihydro-3H-benzo[b][1,4]diazepine-7-carbonitrile 473539-57-0P.
2-[3-(3-Methylisoxazol-5-yl)phenyl]-4-oxo-8-thiomorpholin-4-yl-4,5-dihydro-
3H-benzo[b][1.4]diazepine-7-carbonitrile 473539-60-5P.
7-Chloro-4-[3-(3-methylisoxazol-5-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-61-6P, 7-Chloro-4-[3-(5-
((cyclopropylamino)methyl)-[1,2,4]triazol-1-yl)phenyl]-8-trifluoromethyl-
1.3-dihydrobenzo[b][1.4]diazepin-2-one 473539-62-7P.
7-Chloro-4-[3-(5-((cyclopropylamino)methyl)-[1.2,3]triazol-1-yl)phenyl]-8-
trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one 473539-64-9P.
4-[3-(5-((Cyclopropylamino)methyl)-[1.2.3]triazol-1-yl)phenyl]-7-methyl-8-
trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one 473539-65-0P.
7-Methyl-4-[3-(3-methylisoxazol-5-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-66-1P, 7-Chloro-4-(3-
([1,2,4]triazol-1-yl)phenyl)-8-trifluoromethyl-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-67-2P, 7-Chloro-4-(3-(imidazol-
1-yl)phenyl)-8-trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473539-68-3P, 7-Chloro-4-(3-([1.2.3]triazol-1-yl)phenyl)-8-trifluoromethyl-
1,3-dihydrobenzo[b][1,4]diazepin-2-one 473539-69-4P.
7-Methyl-4-(3-([1.2.4]triazol-1-yl)phenyl)-8-trifluoromethyl-1.3-
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dihydrobenzo[b][1,4]diazepin-2-one 473539-70-7P, 4-(3-(Imidazo]-1-
yl)phenyl)-7-methyl-8-trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-
one 473539-71-8P. 7-Methyl-4-(3-([1,2,3]triazol-1-yl)phenyl)-8-
trifluoromethyl-1.3-dihydrobenzo[b][1,4]diazepin-2-one 473539-72-9P.
7-Methyl-4-(3-(pyrazol-1-yl)phenyl)-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473539-73-0P 473539-75-2P.
4-[3-(4-((Methylamino)methyl)oxazol-2-yl)phenyl]-8-pyrrol-1-yl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-76-3P, 4-[3-(4-
((Dimethylamino)methyl)oxazol-2-yl)phenyl]-8-pyrrol-1-yl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-77-4P, 4-[3-(4-Morpholin-4-
ylmethyloxazol-2-yl)phenyl]-8-pyrrol-1-yl-1.3-dihydrobenzo[b][1.4]diazepin-
2-one 473539-78-5P. 4-(4-0xo-7-(pyrrol-1-yl)-4.5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl)pyridine-2-carbonitrile 473539-79-6P.
7-Methyl-4-[3-(5-methyloxazol-4-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-80-9P, 4-[3-(2-Hydroxymethyl-5-
methylthiazol-4-yl)phenyl]-7-methyl-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473539-81-0P. 4-[3-(4-
Hydroxymethylthiazol-2-yl)phenyl]-7-methyl-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
   (preparation of dihydro-benzo[b][1.4]diazepin-2-one derivs. as metabotropic
   glutamate receptor 2 (mGluR2) antagonists for treatment and/or
   prevention of acute and/or chronic neurol. disorders)
473537-54-1P, N-(5-Amino-2-nitrophenyl)acetamide
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
   (preparation of dihydro-benzo[b][1.4]diazepin-2-one derivs. as metabotropic
   glutamate receptor 2 (mGluR2) antagonists for treatment and/or
   prevention of acute and/or chronic neurol. disorders)
50-00-0, Formaldehyde, reactions 60-34-4, Methylhydrazine 67-56-1,
Methanol, reactions 70-23-5, Ethyl bromopyruvate 74-89-5, Methylamine,
reactions 75-12-7. Formamide, reactions 105-56-6. Ethyl cyanoacetate
106-95-6, Allyl bromide, reactions 107-29-9, Acetaldoxime 108-59-8,
Dimethyl malonate 109-86-4, 2-Methoxyethanol 109-97-7, Pyrrole
110-87-2, 3.4-Dihydro-2H-pyran 110-91-8, Morpholine, reactions
111-42-2, 2-(2-Hydroxyethylamino)ethanol, reactions 121-91-5.
Isophthalic acid. reactions 123-75-1. Pyrrolidine. reactions 123-90-0.
Thiomorpholine 124-40-3, Dimethylamine, reactions 127-08-2, Potassium
acetate 141-43-5. 2-Aminoethanol, reactions 534-07-6.
1.3-Dichloro-2-propanone 540-88-5, tert-Butyl acetate 696-59-3,
2.5-Dimethoxytetrahydrofuran 753-90-2, 2.2.2-Trifluoroethylamine
765-30-0. Cyclopropylamine 1066-54-2. Trimethylsilylacetylene
1635-61-6. 5-Chloro-2-nitrophenylamine 1711-10-0. 3-Iodobenzoyl chloride
1711-11-1. 3-Cyanobenzoyl chloride 1877-71-0. Isophthalic acid
monomethyl ester 2999-46-4. Isocyanoacetic acid ethyl ester 5131-58-8
5307-14-2, 2-Nitro-1,4-phenylenediamine 5470-11-1, Hydroxylamine
hydrochloride 5680-80-8. L-Serine methyl ester hydrochloride 6089-04-9
6148-64-7. Ethyl malonate potassium salt 7664-41-7. Ammonia, reactions
13531-48-1, Methyl 3-cyanobenzoate 14798-03-9, Ammonium, reactions
16982-21-1, Ethyl thiooxamate 18457-04-0, Bis(trimethylsilyl) malonate
22483-09-6. Aminoacetaldehyde dimethyl acetal 26196-45-2.
5-Chloro-2-nitro-1.4-phenylenediamine 35375-74-7, 5-Chloro-2-nitro-4-
trifluoromethylphenylamine 39658-49-6 40167-37-1, 4-Phenylpyrrole-3-
carbonitrile 50634-05-4. 2.5-Dimethoxy-3-tetrahydrofuran-carboxaldehyde
58481-14-4, 2-Cyano-isonicotinic acid ethyl ester 62423-73-8.
3-(2-Bromoacety1)benzoic acid 67018-94-4, (2.5-Dimethoxytetrahydrofuran-
3-yl)methanol 69411-68-3, 4-Amino-2-fluorobenzotrifluoride 71494-93-4.
2-Methoxyacetaldoxime 74738-15-1. 4-(o-Chlorophenyl)pyrrole-3-
carbonitrile 75486-33-8. Malonic acid mono-tert-butyl ester potassium
salt 91187-05-2, (Z)-3-(Hydroxyiminomethyl)benzoic acid methyl ester
93066-93-4. Methyl 3-azidobenzoate 98560-90-8. 2.5-Dimethoxy-2-
methoxymethyltetrahydrofuran 106748-27-0. 3-Thiocarbamoylbenzoic acid
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methyl ester 108035-47-8, 3-(1H-Imidazol-1-yl)benzoic acid
        115006-21-8. Methyl 3-propionylbenzoate 134579-47-8. 2-Iodoisonicotinic
        acid methyl ester 135294-85-8 143151-03-5, 4-Cyano-5-fluoro-2-
        nitroaniline 163852-04-8, 1-(3-Bromophenyl)-3-dimethylaminopropenone
         167626-27-9. Methyl 3-(1H-[1.2.4]triazol-1-yl)benzoate 168618-35-7.
         3-Pyrazol-1-ylbenzoic acid methyl ester 175204-79-2.
        2-(tert-Butylcarbonyloxy)thioacetamide 178742-95-5. Ethyl
         3-ethynylbenzoate 207119-66-2, 2,5-Dimethoxy-3-phenyltetrahydrofuran
         335256-04-7. Ethyl 3-(3-methylisoxazol-5-yl)benzoate 335256-36-5.
         3-(1H-Imidazol-1-yl)benzoyl chloride hydrochloride 335351-27-4.
         3-0xo-3-(3-(4H-[1,2,4]triazol-4-yl)phenyl)propionic acid ethyl ester
         473537-92-7, 4-(3-Bromophenyl)-2.4-dioxobutyric acid ethyl ester
        RL: RCT (Reactant): RACT (Reactant or reagent)
              (reactant; preparation of dihydro-benzo[b][1.4]diazepin-2-one derivs. as
              metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment
              and/or prevention of acute and/or chronic neurol. disorders)
                        THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 3
RF
(1) Hoffmann La Roche: WO 0129011 A 2001 HCAPLUS
(2) Hoffmann La Roche: WO 0129012 A 2001 HCAPLUS
(3) Pajouhesh, H: WO 0110846 A 2001 HCAPLUS
        473538-40-8P, [2-[[3-[3-(3-Methylisoxazol-5-yl)phenyl]-3-
        oxopropionyl]amino]-5-morpholin-4-yl-4-trifluoromethylphenyl]carbamic acid
         tert-butyl ester 473538-60-2P 473538-62-4P.
         \label{lem:condition} \begin{tabular}{l} $[2-[[3-[3-(3-Methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-the lemma of the context of the 
         thiomorpholin-4-yl-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
         473538-66-8P, [5-Methoxy-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
         oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
              473538-79-3P. [4-Cyano-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-
        3-oxopropionyl]amino]-5-(morpholin-4-yl)phenyl]carbamic acid tert-butyl
        ester 473538-81-7P, [5-Chloro-2-[[3-[3-(3-methylisoxazol-5-
        yl)phenyl]-3-oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid
         tert-butyl ester 473538-84-0P, [5-Methyl-2-[[3-[3-(3-
        methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-4-
         trifluoromethylphenyl]carbamic acid tert-butyl ester
        RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation); RACT
         (Reactant or reagent)
              (intermediate; preparation of dihydro-benzo[b][1,4]diazepin-2-one derivs. as
              metabotropic glutamate receptor 2 (mGluR2) antagonists for treatment
              and/or prevention of acute and/or chronic neurol. disorders)
RN
        473538-40-8 HCAPLUS
        Carbamic acid, [2-[[3-[3-(3-methy]-5-isoxazoly])pheny]]-1,3-
         dioxopropyl]amino]-5-(4-morpholinyl)-4-(trifluoromethyl)phenyl]-.
         1.1-dimethylethyl ester (9CI) (CA INDEX NAME)
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RN 473538-60-2 HCAPLUS

CN Carbamic acid. [2-[[1.3-dioxo-3-[3-[3-[[(tetrahydro-2H-pyran-2-yl)oxy]methyl]-5-isoxazolyl]phenyl]propyl]amino]-5-(4-morpholinyl)-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473538-62-4 HCAPLUS

CN Carbamic acid. [2-[[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-(4-thiomorpholinyl)-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473538-66-8 HCAPLUS

CN Carbamic acid. [5-methoxy-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-4-(trifluoromethyl)phenyl]-, 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473538-79-3 HCAPLUS

CN Carbamic acid. [4-cyano-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-(4-morpholinyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473538-81-7 HCAPLUS

CN Carbamic acid, [5-chloro-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473538-84-0 HCAPLUS

CN Carbamic acid. [5-methyl-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

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L17 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
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AN 2002:814112 HCAPLUS

DN 137:325447

ED Entered STN: 25 Oct 2002

TI Preparation of dihydrobenzo[b][1.4]diazepin-2-ones as mGluR2 antagonists for treatment of neurological disorders

IN Adam, Geo: Goetschi, Erwin; Mutel, Vincent; Wichmann, Juergen: Woltering. Thomas Johannes

PA F. Hoffmann-La Roche AG, Switz.

SO PCT Int. Appl.. 202 pp.

CODEN: PIXXD2

DT Patent

LA English
IC ICM C07D243-12

ICS A61K031-5513: C07D403-10: C07D401-04: C07D403-14: C07D417-10: A61P025-00

28-22 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1

FAN.CNT 1

FAN.CNI I								
	PATENT NO.	KIND DATE	APPLICATION NO.	DATE				
ΡI	WO 2002083652	A1 20021024	WO 2002-EP3644	20020402				
	W: AE. AG. AL	. AM. AT. AU. AZ.	BA, BB, BG, BR, BY, BZ	. CA. CH. CN.				
	CO, CR, CU	, CZ, DE, DK, DM,	DZ, EC, EE, ES, FI, GE	B. GD. GE. GH.				
	GM, HR, HU	, ID, IL. IN. IS.	JP, KE, KG, KP, KR, KZ	. LC, LK, LR.				
	LS. LT. LU	, LV, MA, MD, MG,	MK, MN, MW, MX, MZ, NC), NZ, OM, PH.				
	PL, PT, RO	, RU, SD. SE. SG.	SI, SK, SL, TJ, TM, TA	I, TR, TT, TZ,				
	UA, UG, UZ	, VN. YU. ZA. ZM.	ZW. AM. AZ. BY. KG. KZ	. MD. RU. TJ. TM				
	RW: GH, GM. KE	. LS. MW. MZ. SD.	SL, SZ, TZ, UG, ZM, ZW	I. AT. BE, CH.				
	CY. DE. DK	. ES. FI. FR. GB.	GR. IE. IT. LU. MC. NL	., PT. SE, TR.				
	BF, BJ, CF	. CG. CI. CM. GA.	GN. GQ, GW, ML, MR, NE	. SN. TD. TG				
	CA 2442557	AA 20021024	CA 2002-2442557					
	EP 1379511	A1 20040114	EP 2002-737911					
	R: AT, BE, CH	, DE, DK, ES, FR,	GB. GR. IT. LI. LU. NL	., SE. MC. PT.				
	IE. SI. LT	. LV. FI. RO. MK.	CY. AL. TR					

BR 20020088 JP 20045299 US 20021933 US 6544985 NO 20030045 BG 108254 PRAI EP 2001-109 WO 2002-EP3	A1 B2	20010412	JP US NO	2002-8891 2002-581408 2002-115826 2003-4576 2003-108254	20020402 20020403 20031010		
CLASS	• • • • • • • • • • • • • • • • • • • •	••	20020102				
PATENT NO.							
WO 2002083652 JP 2004529925	ICS FTERM	A61K031 C07D417 4C063/A 4C063/C 4C063/C 4C063/C 4C086/A 4C086/B 4C086/B 4C086/A 4C086/A	-5513: C07D4 -10: A61P025 A01: 4C063/A C41: 4C063/C C58: 4C063/C D22: 4C063/D A01: 4C086/A C56: 4C086/B C71: 4C086/N A04: 4C086/A	-00 A03 C42 C62 D25 A02 C60 C82 A14 C42		AC063/BB06; AC063/CC52; AC063/DD12; AC063/EE01; AC086/AA04; AC086/BC69; AC086/MA01; AC086/ZA16;	
US 2002193367	C07D401/04+243+213; C07D403/10+249+243; C07D403/14+243+233+207; C07D417/10+277B+243; C07D417/10285B+243						
OS MARPAT 137:	325447	U10711	, 102030 - 243		•		

$$R^{1-\chi}$$
 R^{2}
 R^{3}
 R^{3}

GI

AB Title compds. I [wherein X = single bond or ethynediyl group; when X = single bond. R1 = CN , halo, (cyclo)alkyl, (fluoro)alkoxy, fluoroalkyl, or (un)substituted pyrrolyl or Ph; when X = ethynediyl, R1 = (un)substituted Ph; R2 = NR4R5, alkoxy, or R5-(un)substituted oxopiperazinyl, pyrrolidinyl, or piperidinyl; R3 = halo, (fluoro)alkyl, alkoxy, CN, (CH2)nC02R5, (CH2)nC0NR4R5, or (un)substituted 5-membered heteroaryl; R4 = H, (cyclo)alkyl, fluoroalkyl, or alkoxyalkyl; R5 = H, (cyclo)alkyl, fluoroalkyl, alkoxyalkyl, (CH2)m-dialkylamino, (CH2)m-morpholinyl, (CH2)m-pyrrolidinyl, (CH2)m-piperidinyl, or hydroxyalkyl; Y = CH, or N; m = 2-4; n = 0-4; or their pharmaceutically acceptable salts thereof] were prepared as metabotropic glutamate receptor 2 (mGluR2) antagonists. For example, coupling (5-amino-2-dimethylamino-2'.3'-difluorobiphenyl-4-

yl)carbamic acid tert-Bu ester with 3-oxo-3-(3-[1.2.3]triazol-1ylphenyl)propionic acid Et ester (preparation of starting materials given) in toluene afforded the amide, which was cyclized using TFA to give the benzodiazepinone II (Ki = 0.070 .mu.M). Twenty-nine compds. of the invention displayed mGluR2 antagonist activity with Ki values ranging from 0.003~mu.M to 0.48~mu.M. Thus, I are useful for the treatment or prevention of acute and/or chronic neurol. disorders, such as psychosis, schizophrenia. Alzheimer's disease, cognitive disorders, and memory deficits (no data). benzodiazepinone prepn mGluR2 antagonist neurol disorder treatment

ST

Mental disorder

(cognitive: preparation of benzodiazepinones as mGluR2 antagonists for treatment of neurol. disorders)

IT Cognition

Memory, biological

(disorder: preparation of benzodiazepinones as mGluR2 antagonists for treatment of neurol disorders)

IT Glutamate receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (metabotropic, mGluR2; preparation of benzodiazepinones as mGluR2 antagonists for treatment of neurol. disorders)

Alzheimer's disease

Anti-Alzheimer's agents

Antipsychotics

Cognition enhancers

Human

Nervous system, disease

Nervous system agents

Schizophrenia

(preparation of benzodiazepinones as mGluR2 antagonists for treatment of neurol. disorders)

IT Mental disorder

> (psychosis; preparation of benzodiazepinones as mGluR2 antagonists for treatment of neurol. disorders)

115006-21-8P. 3-Propionylbenzoic acid methyl ester 335255-81-7P. 3-0xo-3-[3-(1,2,3-triazol-1-yl)phenyl]propionic acid ethyl ester 335255-83-9P. 3-(3-Cyanophenyl)-3-oxopropionic acid tert-butyl ester 335255-84-0P 335255-88-4P. 3-0xo-3-[3-(1,2,4-triazol-1yl)phenyl]propionic acid tert-butyl ester 335255-95-3P. 3-(2-Cyano-pyridin-4-yl)-3-oxopropionic acid tert-butyl ester 335256-03-6P. 3-[3-(3-Methylisoxazol-5-yl)phenyl]-3-oxopropionic acid tert-butyl ester 335256-24-1P, 3-(2.2-Dimethyl-6-oxo-6H-[1,3]dioxin-4yl)benzonitrile 335256-25-2P 335256-44-5P, 4-(2,2-Dimethyl-6-oxo-6H-[1,3]dioxin-4-yl)pyridine-2-carbonitrile 335349-57-0P. 5-Chloro-4-iodo-2-nitrophenylamine 335349-60-5P. (5-Chloro-4-iodo-2nitrophenyl)carbamic acid tert-butyl ester 335350-55-5P 454464-55-2P. 3-(2-Bromopropionyl)benzoic acid methyl ester 473537-10-9P. (5-Fluoro-2-nitro-4-trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-38-1P, (4-Cyano-5-fluoro-2-nitrophenyl)carbamic acid tert-butyl ester 473537-41-6P, (5-Chloro-2-nitro-4-trifluoromethylphenyl)carbamic acid tert-butyl ester 473537-80-3P, 3-0xo-3-[3-[5-(tetrahydropyran-2yloxymethyl)-1,2,3-triazol-1-yl]phenyl]-propionic acid tert-butyl ester 473537-81-4P, 3-[5-(Tetrahydropyran-2-yloxymethyl)-1,2,3-triazol-1yl]benzoic acid methyl ester 473537-82-5P. 3-[2-(3-Methylisoxazol-5yl)pyridin-4-yl]-3-oxopropionic acid tert-butyl ester 473537-84-7P. 3-[3-(2-Methyl-2H-pyrazol-3-yl)phenyl]-3-oxopropionic acid tert-butyl 473537-86-9P 473537-88-1P 473537-90-5P, 3-0xo-3-[3-[3-(tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]phenyl]propionic acid tert-butyl ester 473537-91-6P. 3-[3-(Tetrahydropyran-2yloxymethyl)isoxazol-5-yl]benzoic acid methyl ester 473537-93-8P 473537-94-9P 473537-95-0P, 3-0xo-3-[3-[5-(tetrahydropyran-2yloxymethyl)isoxazol-3-yl]phenyl]propionic acid tert-butyl ester 473537-97-2P, 3-0xo-3-[3-(pyrazol-1-yl)phenyl]propionic acid tert-butyl ester 473537-98-3P, 3-0xo-3-[3-(1,2,3-triazol-1-yl)phenyl]propionic acid

tert-butyl ester 473537-99-4P, 3-0xo-3-[3-[5-(tetrahydropyran-2yloxymethyl)-1.2.4-triazol-1-yl]phenyl]propionic acid tert-butyl ester 473538-00-0P. 3-[5-(Tetrahydropyran-2-yloxymethyl)-1.2.4-triazol-1yl]benzoic acid methyl ester 473538-01-1P 473538-02-2P 473538-03-3P 473538-04-4P, 3-(5-Methyloxazol-4-yl)benzoic acid methyl ester 473538-05-5P 473538-06-6P. 3-(2-Hydroxymethyl-5-methylthiazol-4yl)benzoic acid methyl ester 473538-07-7P, 3-[5-Methyl-2(tetrahydropyran-2-vloxymethyl)thiazol-4-vllbenzoic acid methyl ester 473538-08-8P 473538-09-9P. 3-0xo-3-[3-[4-(tetrahydropyran-2-yloxymethyl)thiazol-2yl]phenyl]propionic acid tert-butyl ester 473538-10-2P. 3-[4-(Hydroxymethyl)thiazol-2-yl]benzoic acid methyl ester 473538-11-3P. 3-[4-(Tetrahydropyran-2-yloxymethyl)thiazol-2-yllbenzoic acid methyl ester 473547-07-8P. (4.5-Dichloro-2-nitrophenyl)carbamic acid tert-butyl ester 473547-08-9P. [4-Iodo-2-nitro-5-(2.2.2-trifluoroethoxy)phenyl]carbamic acid tert-butyl ester 473547-10-3P, (5-Chloro-4-fluoro-2nitrophenyl)carbamic acid tert-butyl ester 473547-11-4P. [2-Nitro-5-(2,2,2-trifluoroethoxy)-4-trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-12-5P. (5-Chloro-4-methyl-2-nitrophenyl)carbamic acid tert-butyl ester 473547-13-6P, (4-Chloro-5-dimethylamino-2nitrophenyl)carbamic acid tert-butyl ester 473547-14-7P. (5-Dimethylamino-4-iodo-2-nitrophenyl)carbamic acid tert-butyl ester 473547-15-8P, [4-Chloro-5-[(2-methoxyethyl)(methyl)amino]-2nitrophenyl]carbamic acid tert-butyl ester 473547-16-9P. (5-Dimethylamino-2-nitro-4-trifluoromethylphenyl)carbamic acid tert-butyl ester 473547-17-0P 473547-18-1P 473547-19-2P, [4-Chloro-5-(diethylamino)-2-nitrophenyl]carbamic acid tert-butyl ester 473547-20-5P, [4-Chloro-2-nitro-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-21-6P 473547-22-7P, [2-Nitro-5-(pyrrolidin-1yl)-4-trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-23-8P. (5-Dimethylamino-4-fluoro-2-nitrophenyl)carbamic acid tert-butyl ester 473547-24-9P, [4-Chloro-2-nitro-5-(piperidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-25-0P, [4-Fluoro-2-nitro-5-(pyrrolidin-1yl)phenyl]carbamic acid tert-butyl ester 473547-26-1P. [5-(Azetidin-1-yl)-4-chloro-2-nitrophenyl]carbamic acid tert-butyl ester 473547-27-2P. [5-(Azetidin-1-yl)-2-nitro-4-trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-28-3P 473547-29-4P 473547-30-7P. (2-Dimethylamino-2'-fluoro-5-nitrobiphenyl-4-yl)carbamic acid tert-butyl ester 473547-31-8P. (2-Chloro-2'-fluoro-5-nitrobiphenyl-4-yl)carbamic acid tert-butyl ester 473547-32-9P. (5-Dimethylamino-4-methyl-2nitrophenyl)carbamic acid tert-butyl ester 473547-33-0P. (4-Cyano-5-dimethylamino-2-nitrophenyl)carbamic acid tert-butyl ester 473547-34-1P 473547-35-2P 473547-36-3P 473547-37-4P 473547-38-5P. [4-Cyano-2-nitro-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-39-6P 473547-40-9P. (4-Cyano-5-diethylamino-2nitrophenyl)carbamic acid tert-butyl ester 473547-41-0P 473547-42-1P 473547-43-2P. [4-Cyano-2-nitro-5-(piperidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-44-3P. (4-Chloro-5-isobutylamino-2nitrophenyl)carbamic acid tert-butyl ester 473547-45-4P 473547-46-5P 473547-47-6P 473547-48-7P 473547-49-8P, [4-Methyl-2-nitro-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-50-1P. (4-Chloro-5-isopropylamino-2-nitrophenyl)carbamic acid tert-butyl ester 473547-51-2P. (5-Isobutylamino-2-nitro-4-trifluoromethylphenyl)carbamic acid tert-butyl ester 473547-52-3P. (2-Dimethylamino-2',3'-difluoro-5nitrobiphenyl-4-yl)carbamic acid tert-butyl ester 473547-53-4P. [2'-Fluoro-5-nitro-2-(2.2.2-trifluoroethoxy)biphenyl-4-yl]carbamic acid tert-butyl ester 473547-54-5P, (2-Amino-4-chloro-5dimethylaminophenyl)carbamic acid tert-butyl ester 473547-55-6P 473547-57-8P. (5-Amino-2-dimethylamino-2',3'-difluorobiphenyl-4yl)carbamic acid tert-butyl ester 473547-58-9P. [2-Amino-4-chloro-5-[(2methoxyethyl)(methyl)amino]phenyl]carbamic acid tert-butyl ester 473547-59-0P. [5-Amino-2'-fluoro-2-(2,2,2-trifluoroethoxy)biphenyl-4yl]carbamic acid tert-butyl ester 473547-60-3P. (2-Amino-5-dimethylamino-4-trifluoromethylphenyl)carbamic acid tert-butyl ester 473547-61-4P. [2-Amino-4-chloro-5-(ethylmethylamino)phenyl]carbamic acid tert-butyl

473547-62-5P. [2-Amino-4-chloro-5-(methylpropylamino)phenyl]carbam ic acid tert-butyl ester 473547-63-6P, [2-Amino-4-chloro-5-(diethylamino)phenyl]carbamic acid tert-butyl ester 473547-64-7P. [2-Amino-4-chloro-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-65-8P. [2-Amino-4-chloro-5-(cyclopropylmethylamino)phenyl]carbamic acid tert-butyl ester 473547-66-9P. [2-Amino-5-(pyrrolidin-1-yl)-4trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-67-0P. (2-Amino-5-dimethylamino-4-fluorophenyl)carbamic acid tert-butyl ester 473547-69-2P, [2-Amino-4-fluoro-5-(pyrrolidin-1-473547-68-1P yl)phenyl]carbamic acid tert-butyl ester 473547-70-5P. [2-Amino-5-(azetidin-1-yl)-4-chlorophenyl]carbamic acid tert-butyl ester 473547-71-6P. [2-Amino-5-(azetidin-1-yl)-4-trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-72-7P 473547-73-8P 473547-74-9P, (5-Amino-2-dimethylamino-2'-fluorobiphenyl-4-yl)carbamic acid tert-butyl 473547-75-0P. [2-Amino-5-(2.2.2-trifluoroethoxy)-4trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-76-1P. (2-Amino-5-dimethylamino-4-methylphenyl)carbamic acid tert-butyl ester 473547-77-2P, (2-Amino-4-cyano-5-dimethylaminophenyl)carbamic acid tert-butyl ester 473547-78-3P. [2-Amino-4-methyl-5-(methylpropylamino)phenyl]carbamic acid tert-butyl ester 473547-80-7P. [2-Amino-4-chloro-5-(isopropylmethylamino)phenyl]carbamic acid tert-butyl ester 473547-81-8P, [2-Amino-4-chloro-5-(isobutylmethylamino)phenyl]carbamic acid tert-butyl ester 473547-82-9P, [2-Amino-4-cyano-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-83-0P. [2-Amino-4-cyano-5-(methylpropylamino)phenyl]carbamic acid tert-butyl ester 473547-84-1P, (2-Amino-4-cyano-5diethylaminophenyl)carbamic acid tert-butyl ester 473547-85-2P. [2-Amino-4-cyano-5-(isopropylmethylamino)phenyl]carbamic acid tert-butyl ester 473547-86-3P, [2-Amino-4-cyano-5-(isobutylmethylamino)phenyl]carba mic acid tert-butyl ester 473547-87-4P, [2-Amino-4-cyano-5-(piperidin-1yl)phenyl]carbamic acid tert-butyl ester 473547-88-5P, (2-Amino-4-chloro-5-isobutylaminophenyl)carbamic acid tert-butyl ester 473547-89-6P 473547-90-9P 473547-91-0P 473547-92-1P 473547-93-2P. [2-Amino-4-methyl-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester 473547-94-3P, (2-Amino-4-chloro-5-isopropylaminophenyl)carbamic acid tert-butyl ester 473547-95-4P, [2-Amino-5-(isobutylamino)-4trifluoromethylphenyl]carbamic acid tert-butyl ester 473547-97-6P. 3-0xo-3-[3-[4-(tetrahydropyran-2-yloxymethyl)oxazol-2-yl]phenyl]propionic acid tert-butyl ester 473547-98-7P, 3-[4-(Tetrahydropyran-2yloxymethyl)oxazol-2-yl]benzoic acid methyl ester 473547-99-8P. 3-[4-(Chloromethyl)oxazol-2-yl]benzoic acid methyl ester 473548-00-4P. 3-[4-(Hydroxymethyl)oxazol-2-yl]benzoic acid methyl ester 473548-01-5P 473548-03-7P 473548-04-8P, 3-[2-Methyl-5-(tetrahydropyran-2-yloxymethyl)-2H-pyrazol-3-yl]benzoic acid methyl ester 473548-05-9P. 5-(3-Bromophenyl)-1-methyl-1H-pyrazole-3-carboxylic acid ethyl ester 473548-06-0P. [5-(3-Bromophenyl)-1-methyl-1H-pyrazol-3-yl]methanol 473548-07-1P. 5-(3-Bromophenyl)-1-methyl-3-(tetrahydropyran-2-yloxymethyl)-1H-pyrazole 473548-08-2P, 3-(5-Hydroxymethyl-2-methyl-2H-pyrazol-3yl)benzoic acid methyl ester 473548-09-3P, 3-0xo-3-[3-[4-(tetrahydropyran-2-yloxymethyl)pyrazol-1-yl]phenyl]propionic acid tert-butyl ester 473548-10-6P, 3-[4-(Tetrahydropyran-2yloxymethyl)pyrazol-1-yl]benzoic acid methyl ester 473548-11-7P. 5-Amino-1-[3-(methoxycarbonyl)phenyl]-1H-pyrazole-4-carboxylic acid benzyl ester 473548-12-8P. 1-[3-(Methoxycarbonyl)phenyl]-1H-pyrazole-4carboxylic acid benzyl ester 473548-13-9P, 1-[3-(Methoxycarbonyl)phenyl]-1H-pyrazole-4-carboxylic acid 473548-14-0P. 3-(4-Hydroxymethylpyrazol-1yl)benzoic acid methyl ester 473548-15-1P, 3-0xo-3-[3-[4-(tetrahydropyran-2-yloxymethyl)isoxazol-3-yl]phenyl]propionic acid tert-butyl ester 473548-17-3P 473548-18-4P 473548-19-5P 473548-20-8P 473548-22-0P. 3-0xo-3-[3-[2-[2-(tetrahydropyran-2yloxy)ethyl]-2H-pyrazol-3-yl]phenyl]propionic acid tert-butyl ester 473548-23-1P, 3-[2-[2-(Tetrahydropyran-2-yloxy)ethyl]-2H-pyrazol-3yl]benzoic acid methyl ester 473548-24-2P 473548-25-3P 473548-26-4P 473548-27-5P, 3-[2-[2-(Tetrahydropyran-2-yloxy)ethyl]-2H-pyrazol-3-

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yl]benzoic acid 473548-28-6P, 3-0xo-3-[3-[5-[2-(tetrahydropyran-2-
yloxy)ethyl]-1,2,3-triazol-1-yl]phenyl]propionic acid tert-butyl ester
473548-30-0P. 3-0xo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)pyrazol-1-
yl]phenyl]propionic acid ethyl ester 473548-31-1P. 3-[5-(Tetrahydropyran-
2-yloxymethyl)pyrazol-1-yl]benzoic acid 473548-32-2P.
3-(5-Hydroxymethylpyrazol-1-yl)benzoic acid tert-butyl ester
473548-33-3P. 3-(5-Hydroxymethylpyrazol-1-yl)benzoic acid methyl ester
473548-34-4P. 3-[5-(Tetrahydropyran-2-yloxymethyl)pyrazol-1-yl]benzoic
acid methyl ester 473548-35-5P, 3-0xo-3-[3-(2-bromo-1.1-
dimethoxyethyl)phenyl]propionic acid tert-butyl ester 473548-36-6P.
3-(2-Bromo-1,1-dimethoxyethyl)benzoic acid methyl ester 473548-37-7P.
3-0xo-3-[3-(2-methyloxazol-4-yl)phenyl]propionic acid tert-butyl ester
473548-38-8P, 3-(2-Methyloxazol-4-yl)benzoic acid 473548-39-9P.
3-(2-Methyloxazol-4-yl)benzoic acid methyl ester 473548-40-2P.
3-0xo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)-1,3,4-thiadiazol-2-
yl]phenyl]propionic acid tert-butyl ester 473548-41-3P 473548-44-6P
473548-45-7P. 3-[5-Hydroxymethyl-1,3.4-thiadiazol-2-yl]benzoic acid methyl
       473548-46-8P, 3-[5-(Tetrahydropyran-2-yloxymethyl)-1.3.4-
thiadiazol-2-yl]benzoic acid methyl ester 473548-47-9P.
3-0xo-3-[3-[5-[2-(tetrahydropyran-2-yloxy)ethyl]-1,3,4-thiadiazol-2-
yl]phenyl]propionic acid tert-butyl ester 473548-48-0P.
3-[5-(2-Hydroxyethyl)-1.3.4-thiadiazol-2-yl]benzoic acid methyl ester
473548-49-1P, 3-[5-[2-(Tetrahydropyran-2-yloxy)ethyl]-1.3.4-thiadiazol-2-
yl]benzoic acid methyl ester 473548-50-4P. 3-0xo-3-[3-[5-
(tetrahydropyran-2-yloxymethyl)-1.3,4-oxadiazol-2-yl]phenyl]propionic acid
tert-butyl ester 473548-51-5P, 3-[5-(Hydroxymethyl)-1.3.4-oxadiazol-2-
yl]benzoic acid methyl ester 473548-52-6P, 3-0xo-3-[3-[5-[2-
(tetrahydropyran-2-yloxy)ethyl]-1,3,4-oxadiazol-2-yl]phenyl]propionic acid
tert-butyl ester 473548-53-7P, 3-[5-(2-Hydroxyethyl)-1.3.4-oxadiazol-2-
yl]benzoic acid methyl ester 473548-54-8P 473548-55-9P.
3-(0xazol-4-yl)benzoic acid methyl ester 473548-56-0P.
3-0xo-3-[3-(thiazol-4-yl)phenyl]propionic acid tert-butyl ester
473548-57-1P, 3-(Thiazol-4-yl)benzoic acid methyl ester 473548-58-2P
473548-59-3P 473548-60-6P 473548-61-7P, 3-(2-Bromopentanoy1)benzoic
acid methyl ester 473548-62-8P, 3-(2-Methyl-5-propyloxazol-4-yl)benzoic
acid methyl ester 473548-63-9P 473548-64-0P, 3-(5-Methylthiazol-4-
yl)benzoic acid methyl ester 473548-65-1P 473548-66-2P.
3-(2,5-Dimethylthiazol-4-yl)benzoic acid methyl ester 473548-67-3P.
3-0xo-3-[3-[5-propy]-4-(tetrahydropyran-2-yloxymethyl)thiazol-2-
yl]phenyl]propionic acid tert-butyl ester 473548-68-4P.
3-[5-Propyl-4-(tetrahydropyran-2-yloxymethyl)thiazol-2-yl]benzoic acid
methyl ester 473548-69-5P, 3-0xo-3-[3-[2-methyl-5-(tetrahydropyran-2-
yloxymethyl)thiazol-4-yl]phenyl]propionic acid tert-butyl ester
473548-70-8P. 3-(5-Bromomethyl-2-methylthiazol-4-yl)benzoic acid methyl
ester 473548-71-9P. 3-(5-Hydroxymethyl-2-methylthiazol-4-yl)benzoic acid
methyl ester 473548-72-0P, 3-[2-Methyl-5-(tetrahydropyran-2-
yloxymethyl)thiazol-4-yl]benzoic acid methyl ester 473548-73-1P.
3-0xo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)thiazol-4-yl]phenyl]propionic
acid tert-butyl ester 473548-74-2P. 3-(5-Bromomethylthiazol-4-yl)benzoic
acid methyl ester 473548-75-3P. 3-(5-Hydroxymethylthiazol-4-yl)benzoic
acid methyl ester 473548-76-4P, 3-[5-(Tetrahydropyran-2-
yloxymethyl)thiazol-4-yl]benzoic acid methyl ester 473548-77-5P
473548-78-6P, 3-Dihydroxyacetylbenzoic acid methyl ester 473548-79-7P
473548-80-0P, 6-[3-(Imidazol-1-yl)phenyl]-2,2-dimethyl[1,3]dioxin-4-one
473548-81-1P. 2.2-Dimethyl-6-[3-(1.2.3-triazol-1-yl)phenyl][1.3]dioxin-4-
     473548-82-2P. [4-Chloro-2-[[3-(3-cyano-phenyl)-3-oxopropionyl]amino]-
5-dimethylaminophenyl]carbamic acid tert-butyl ester 473548-83-3P.
[4-Chloro-5-dimethylamino-2-[[3-oxo-3-[3-(1.2.3-triazol-1-
yl)phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473548-84-4P, [4-Chloro-5-dimethylamino-2-[[3-oxo-3-[3-[5-(tetrahydropyran-
2-yloxymethyl)-1.2,3-triazol-1-yl]phenyl]propionyl]amino]phenyl]carbamic
acid tert-butyl ester 473548-85-5P 473548-86-6P 473548-87-7P
. [4-Chloro-5-dimethylamino-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester 473548-90-2P.
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yloxymethyl)-1.2.3-triazol-1-yl]phenyl]propionyl]amino]biphenyl-4-
yl]carbamic acid tert-butyl ester 473548-92-4P. [2-Dimethylamino-2'.3'-
difluoro-5-[[3-oxo-3-[3-(1.2.3-triazol-1-yl)phenyl]propionyl]amino]bipheny
1-4-y1]carbamic acid tert-buty1 ester 473548-94-6P. [5-[3-(3-
\label{lem:cyanophenylo-3-oxopropionylamino} \textbf{Cyanophenylo-3-oxopropionylamino} \textbf{-2-dimethylamino-2'.3'-difluorobiphenylo-4-dimethylamino}.
yl]carbamic acid tert-butyl ester 473548-95-7P. [4-Chloro-5-
dimethylamino-2-[[3-[2-(3-methylisoxazol-5-yl)pyridin-4-yl]-3-
oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
473548-97-9P 473548-99-1P 473549-01-8P 473549-02-9P
473549-04-1P. [4-Chloro-2-[[3-(2-cyano-pyridin-4-yl)-3-oxopropionyl]amino]-
5-dimethylaminophenyl]carbamic acid tert-butyl ester 473549-05-2P.
[4-Chloro-5-dimethylamino-2-[[3-[3-(2-methyl-2H-pyrazol-3-yl)phenyl]-3-
oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester 473549-06-3P.
[5-Dimethylamino-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)-1.2.3-
triazol-1-yl]phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-07-4P. [5-Dimethylamino-2-[[3-[3-(3-
methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester
                                                                                   473549-08-5P
473549-09-6P, [4-Chloro-5-dimethylamino-2-[[3-[3-(3-
methoxymethylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic
acid tert-butyl ester 473549-10-9P. [2-[[3-(2-Cyano-pyridin-4-yl)-3-
oxopropionyl]amino]-5-dimethylamino-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-11-0P 473549-12-1P 473549-13-2P.
[2'-Fluoro-5-[[3-oxo-3-[3-(1,2,3-triazol-1-yl)phenyl]propionyl]amino]-2-
(2,2,2-trifluoroethoxy)biphenyl-4-yl]carbamic acid tert-butyl ester
473549-14-3P, [2'-Fluoro-5-[[3-oxo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)-
1.2.3-triazol-1-yl]phenyl]propionyl]amino]-2-(2.2.2-
trifluoroethoxy)biphenyl-4-yl]carbamic acid tert-butyl ester
473549-15-4P 473549-16-5P
RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT
(Reactant or reagent)
     (intermediate; preparation of benzodiazepinone mGluR2 antagonists by
     coupling benzenediamines with dioxinones or oxopropanoates followed by
    cyclization)
473549-17-6P, [4-Chloro-5-(diethylamino)-2-[[3-oxo-3-[3-[5-
(tetrahydropyran-2-yloxymethyl)-1,2,3-triazol-1-
yl]phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473549-18-7P, [4-Chloro-5-dimethylamino-2-[[3-oxo-3-[3-[3-
(tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]phenyl]propionyl]amino]phenyl
]carbamic acid tert-butyl ester 473549-19-8P, [4-Chloro-2-[[3-oxo-3-[3-
[5-(tetrahydropyran-2-yloxymethyl)-1.2.3-triazol-1-
yl]phenyl]propionyl]amino]-5-(pyrrolidin-1-yl)phenyl]carbamic acid
tert-butyl ester 473549-20-1P. [5-Dimethylamino-2-[[3-[3-(2-methyl-2H-
pyrazol-3-yl)phenyl]-3-oxopropionyl]amino]-4-trifluoromethylphenyl]carbami
c acid tert-butyl ester 473549-21-2P, [4-Chloro-5-dimethylamino-
2-[[3-[3-[3-methy]-4-(tetrahydropyran-2-yloxymethy])isoxazol-5-yl]phenyl]-
3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester 473549-22-3P
473549-23-4P 473549-24-5P, [4-Chloro-5-dimethylamino-2-[[3-[3-[2-methyl-
5-(tetrahydropyran-2-yloxymethyl)-2H-pyrazol-3-yl]phenyl]-3-
oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester 473549-25-6P.
[2-[[3-(2-Cyano-pyridin-4-yl)-3-oxopropionyl]amino]-5-(pyrrolidin-1-yl)-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-26-7P.
[2-[[3-0xo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)-1.2.3-triazol-1-
yl]phenyl]propionyl]amino]-5-(pyrrolidin-1-yl)-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-27-8P.
[5-Dimethylamino-4-fluoro-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-
yloxymethyl)-1.2.3-triazol-1-yl]phenyl]propionyl]amino]phenyl]carbamic
acid tert-butyl ester 473549-28-9P 473549-29-0P.
\hbox{\tt [5-Dimethy] amino-4-fluoro-2-[[3-oxo-3-[3-[3-(tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyran-2-tetrahydropyra
yloxymethyl)isoxazol-5-yl]phenyl]propionyl]amino]phenyl]carbamic acid
tert-butyl ester 473549-30-3P. [5-Dimethylamino-2-[[3-oxo-3-[3-
[3-(tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]phenyl]propionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-31-4P.
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[2-Dimethylamino-2',3'-difluoro-5-[[3-oxo-3-[3-[5-(tetrahydropyran-2-

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[4-Chloro-5-dimethylamino-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-
yloxymethyl)isoxazol-3-yl]phenyl]propionyl]amino]phenyl]carbamic acid
tert-butyl ester 473549-32-5P, [4-Chloro-2-[[3-oxo-3-[3-[5-
(tetrahydropyran-2-yloxymethyl)-1.2.3-triazol-1-yl]phenyl]propionyl]amino]-
5-(piperidin-1-yl)phenyl]carbamic acid tert-butyl ester 473549-33-6P.
[5-Dimethylamino-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)isoxazol-
3-yl]phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-34-7P. [4-Chloro-5-dimethylamino-2-[[3-oxo-3-[3-
(pyrazol-1-yl)phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473549-35-8P. [2-[[3-(2-Cyano-pyridin-4-yl)-3-oxopropionyl]amino]-4-fluoro-
5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester
473549-36-9P. [4-Fluoro-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyl]amino]-5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl
       473549-37-0P, [4-Fluoro-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-
ester
yloxymethyl)-1.2.3-triazol-1-yl]phenyl]propionyl]amino]-5-(pyrrolidin-1-
yl)phenyl]carbamic acid tert-butyl ester 473549-38-1P.
[5-(Azetidin-1-yl)-4-chloro-2-[[3-(2-cyano-pyridin-4-yl)-3-
oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester 473549-39-2P.
[2-[[3-0xo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)isoxazol-3-
yl]phenyl]propionyl]amino]-5-(pyrrolidin-1-yl)-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-40-5P.
[5-(Azetidin-1-yl)-2-[[3-(2-cyano-pyridin-4-yl)-3-oxopropionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-41-6P
. [5-(Azetidin-1-yl)-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
473549-43-8P, [5-(Azetidin-1-yl)-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-
yloxymethyl)-1.2.3-triazol-1-yl]phenyl]propionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-44-9P.
[5-Dimethylamino-2-[[3-oxo-3-[3-(pyrazol-1-yl)phenyl]propionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-45-0P.
[5-Dimethylamino-2-[[3-[3-(imidazol-1-yl)phenyl]-3-oxopropionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester
                                                      473549-46-1P.
[4-Chloro-5-dimethylamino-2-[[3-oxo-3-[3-[4-(tetrahydropyran-2-
yloxymethyl)pyrazol-1-yl]phenyl]propionyl]amino]phenyl]carbamic acid
tert-butyl ester 473549-47-2P, [5-Dimethylamino-2-[[3-oxo-3-[3-[4-
(tetrahydropyran-2-yloxymethyl)pyrazol-1-yl]phenyl]propionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-48-3P
. [5-Dimethylamino-2-[[3-[3-[3-methyl-4-(tetrahydropyran-2-
yloxymethyl)isoxazol-5-yl]phenyl]-3-oxopropionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-49-4P.
[5-Dimethylamino-2-[[3-oxo-3-[3-[4-(tetrahydropyran-2-yloxymethyl)isoxazol-
3-yllphenyllpropionyllaminol-4-trifluoromethylphenyllcarbamic acid
tert-butyl ester 473549-50-7P, [5-Dimethylamino-2-[[3-[3-(2-
methylsulfanylimidazol-1-yl)phenyl]-3-oxopropionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-51-8P.
[5-Dimethylamino-2-[[3-[3-[2-methyl-4-(tetrahydropyran-2-yloxymethyl)-2H-
pyrazol-3-yl]phenyl]-3-oxopropionyl]amino]-4-trifluoromethylphenyl]carbami
c acid tert-butyl ester 473549-52-9P, [4-Chloro-5-dimethylamino-2-[[3-
oxo-3-[3-(1.2.4-triazol-1-yl)phenyl]propionyl]amino]phenyl]carbamic acid
tert-butyl ester 473549-53-0P, [5-Dimethylamino-2-[[3-oxo-3-[3-(1.2.4-
triazol-1-yl)phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-54-1P. [2-[[3-(3-Cyanophenyl)-3-
oxopropionyl]amino]-5-dimethylamino-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-55-2P 473549-56-3P 473549-57-4P.
[5-Dimethylamino-2-[[3-oxo-3-[3-[2-[2-(tetrahydropyran-2-yloxy)ethyl]-2H-
pyrazol-3-yl]phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-58-5P 473549-59-6P. [2-Dimethylamino-2'-fluoro-
5-[[3-oxo-3-[3-(1.2.3-triazol-1-yl)phenyl]propionyl]amino]biphenyl-4-
yl]carbamic acid tert-butyl ester 473549-60-9P, [5-Dimethylamino-2-[[3-
oxo-3-[3-[5-[2-(tetrahydropyran-2-yloxy)ethyl]-1,2,3-triazol-1-
yl]phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-61-0P, [5-Dimethylamino-2-[[3-oxo-3-[3-[5-
(tetrahydropyran-2-yloxymethyl)pyrazol-1-yl]phenyl]propionyl]amino]-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-62-1P.
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[5-Dimethylamino-2-[[3-oxo-3-[3-(1,2,3-triazo]-1-
yl)phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473549-63-2P, [2-[[3-(2-Cyano-pyridin-4-yl)-3-
oxopropionyl]amino]-5-(2.2.2-trifluoroethoxy)-4-
trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-64-3P.
[2-[[3-(3-Cyanophenyl)-3-oxopropionyl]amino]-4-dimethylamino-5-
methylphenyl]carbamic acid tert-butyl ester 473549-65-4P.
[5-Dimethylamino-4-methyl-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-
yloxymethyl)-1.2.3-triazol-1-yl]phenyl]propionyl]amino]phenyl]carbamic
acid tert-butyl ester 473549-66-5P. [5-Cyano-2-[[3-(3-cyanophenyl)-3-
oxopropionyl]amino]-4-dimethylaminophenyl]carbamic acid tert-butyl ester
473549-67-6P, [2-[[3-(3-Cyanophenyl)-3-oxopropionyl]amino]-5-methyl-4-
(methylpropylamino)phenyl]carbamic acid tert-butyl ester 473549-68-7P
473549-69-8P 473549-70-1P, [4-Cyano-5-dimethylamino-2-[[3-oxo-3-[3-[5-
(tetrahydropyran-2-yloxymethyl)-1,2,3-triazol-1-
yl]phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473549-71-2P 473549-72-3P, [4-Methyl-2-[[3-[3-(3-methylisoxazol-
5-yl)phenyl]-3-oxopropionyl]amino]-5-(methylpropylamino)phenyl]carbamic
acid tert-butyl ester 473549-73-4P, [4-Cyano-5-dimethylamino-2-
[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic
acid tert-butyl ester 473549-74-5P 473549-75-6P.
[5-Dimethylamino-4-methyl-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester 473549-76-7P
473549-77-8P 473549-78-9P, [4-Cyano-2-[[3-oxo-3-[3-[5-
(tetrahydropyran-2-yloxymethyl)-1,2,3-triazol-1-yl]phenyl]propionyl]amino]-
5-(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester
473549-79-0P. [4-Cyano-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyllaminol-5-(pyrrolidin-1-yl)phenyllcarbamic acid tert-butyl
       473549-80-3P 473549-81-4P, [4-Cyano-2-[[3-[3-(3-
methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-
(methylpropylamino)phenyl]carbamic acid tert-butyl ester
473549-82-5P. [4-Cvano-5-diethylamino-2-[[3-[3-(3-methylisoxazol-5-
yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
473549-83-6P 473549-84-7P 473549-85-8P 473549-86-9P
473549-87-0P. [4-Cyano-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
oxopropionyl]amino]-5-(piperidin-1-yl)phenyl]carbamic acid tert-butyl
ester 473549-88-1P, [4-Chloro-5-isobutylamino-2-[[3-[3-(3-
methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid
tert-butyl ester 473549-89-2P, [4-Chloro-5-isobutylamino-2-[[3-oxo-3-[3-
[5-(tetrahydropyran-2-yloxymethyl)-1,2,3-triazol-1-
yl]phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473549-90-5P 473549-91-6P
                          473549-92-7P 473549-93-8P
473549-94-9P 473549-95-0P
                           473549-96-1P 473549-97-2P
473549-98-3P. [4-Methyl-2-[[3-oxo-3-[3-[5-(tetrahydropyran-2-yloxymethyl)-
1.2.3-triazol-1-yl]phenyl]propionyl]amino]-5-(pyrrolidin-1-
yl)phenyl]carbamic acid tert-butyl ester 473549-99-4P.
[4-Methyl-2-[[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-
(pyrrolidin-1-yl)phenyl]carbamic acid tert-butyl ester
473550-00-4P, [4-Chloro-5-isopropylamino-2-[[3-[3-(3-
methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid
tert-butyl ester 473550-01-5P. [4-Chloro-5-isopropylamino-2-[[3-oxo-3-[3-
[5-(tetrahydropyran-2-yloxymethyl)-1,2,3-triazol-1-
yl]phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473550-02-6P
              473550-03-7P
                             473550-04-8P 473550-05-9P
                                                           473550-06-0P
               473550-08-2P
                             473550-09-3P 473550-10-6P
                                                            473550-11-7P
473550-07-1P
              473550-13-9P, [2-[[3-[3-(Imidazol-1-yl)phenyl]-3-
oxopropionyl]amino]-5-isobutylamino-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473550-14-0P. [4-Chloro-2-[[3-[3-(imidazol-1-yl)phenyl]-
3-oxopropionyl]amino]-5-isobutylaminophenyl]carbamic acid tert-butyl ester
473550-15-1P, [4-Chloro-5-(isobutylamino)-2-[[3-oxo-3-[3-(1.2.3-triazol-1-
yl)phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
473550-16-2P. [5-(Isobutylamino)-2-[[3-oxo-3-[3-(1.2.3-triazol-1-
yl)phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473550-17-3P. [4-Chloro-5-(isobutylamino)-2-[[3-oxo-3-
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[3-(1.2.4-triazol-1-yl)phenyl]propionyl]amino]phenyl]carbamic acid
tert-butyl ester 473550-18-4P, [5-(Isobutylamino)-2-[[3-oxo-3-[3-(1.2.4-
triazol-1-yl)phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
tert-butyl ester 473550-34-4P. 3-[7-Chloro-8-dimethylamino-4-oxo-4.5-
dihydro-3H-benzo[b][1,4]diazepin-2-yl]thiobenzamide 473551-90-5P.
8-Chloro-4-[3-[4-(chloromethyl)thiazol-2-yl]phenyl]-7-dimethylamino-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473551-93-8P. 4-[3-
(Bromoacetyl)phenyl]-8-chloro-7-dimethylamino-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473552-13-5P, 4-[3-
(Bromoacetyl)phenyl]-7-dimethylamino-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473553-34-3P
RL: RCT (Reactant): SPN (Synthetic preparation); PREP (Preparation): RACT
(Reactant or reagent)
   (intermediate: preparation of benzodiazepinone mGluR2 antagonists by
   coupling benzenediamines with dioxinones or oxopropanoates followed by
   cyclization)
473546-82-6P, 8-Chloro-7-dimethylamino-4-[3-[4-(hydroxymethyl)thiazol-2-
yl]phenyl]-1.3-dihydrobenzo[b][1,4]diazepin-2-one 473546-85-9P
473546-96-2P, 8-Chloro-4-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-yl]phenyl]-
7-(isobutylmethylamino)-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473546-99-5P. 8-Chloro-4-[3-[5-(hydroxymethyl)-1,2,4-triazol-1-yl]phenyl]-
7-(isobutylmethylamino)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473550-19-5P, 3-(7-Chloro-8-dimethylamino-4-oxo-4,5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl)benzonitrile 473550-21-9P.
8-Chloro-7-dimethylamino-4-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-
yl]phenyl]-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473550-32-2P.
7-Dimethylamino-4-[3-[5-(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-57-1P.
7-Dimethylamino-4-[3-(3-hydroxymethylisoxazol-5-yl)phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-77-5P.
7-Dimethylamino-4-[3-(4-hydroxymethylpyrazol-1-yl)phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1,4]diazepin-2-one 473550-85-5P
473551-00-7P. 8-Chloro-4-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-yl]phenyl]-
7-(isopropylmethylamino)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473551-13-2P 473551-19-8P 473551-21-2P 473551-33-6P 473551-64-3P
473552-18-0P, 7-Dimethylamino-4-[3-(5-hydroxymethylthiazol-4-yl)phenyl]-8-
trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); RACT (Reactant or reagent); USES (Uses)
   (mGluR2 antagonist; preparation of benzodiazepinone mGluR2 antagonists by
   coupling benzenediamines with dioxinones or oxopropanoates followed by
   cyclization)
473546-78-0P. 3-[8-Dimethylamino-4-oxo-7-phenylethynyl-4.5-dihydro-3H-
benzo[b][1.4]diazepin-2-yl]benzonitrile 473546-79-1P.
8-(2.3-Difluorophenyl)-7-dimethylamino-4-[3-(1.2.3-triazol-1-yl)phenyl]-
1.3-dihydrobenzo[b][1.4]diazepin-2-one 473546-80-4P.
8-Chloro-7-[(2-methoxyethyl)(methyl)amino]-4-[3-(3-methylisoxazol-5-
yl)phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473546-81-5P.
8-Chloro-7-dimethylamino-4-[3-(2-methyl-2H-pyrazol-3-yl)phenyl]-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473546-83-7P, 8-(2-Fluorophenyl)-4-[3-
(3-methylisoxazol-5-yl)phenyl]-7-(2,2,2-trifluoroethoxy)-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473546-84-8P, 8-Chloro-7-
dimethylamino-4-[3-[4-(hydroxymethyl)oxazol-2-yl]phenyl]-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473546-86-0P. 8-Chloro-7-
(diethylamino)-4-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-yl]phenyl]-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473546-87-1P, 8-Chloro-4-[3-[5-
(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-7-(pyrrolidin-1-yl)-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473546-88-2P 473546-89-3P.
8-Chloro-7-dimethylamino-4-[3-(pyrazol-1-yl)phenyl]-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473546-90-6P, 7-Dimethylamino-4-[3-(3-
morpholin-4-ylmethylisoxazol-5-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473546-91-7P, 7-Dimethylamino-4-[3-(2-
methylsulfanylimidazol-1-yl)phenyl]-8-trifluoromethyl-1.3-
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dihydrobenzo[b][1.4]diazepin-2-one 473546-92-8P 473546-93-9P
473546-94-0P. 4-[4-0xo-8-(2.2.2-trifluoroethoxy)-7-trifluoromethyl-4.5-
dihydro-3H-benzo[b][1.4]diazepin-2-vl]pyridine-2-carbonitrile
473546-95-1P 473546-97-3P, 8-Diethylamino-2-[3-(3-methylisoxazol-5-
yl)phenyl]-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepine-7-carbonitrile
473546-98-4P, 4-[3-[5-(Azetidin-1-ylmethyl)-1,2,3-triazol-1-yl]phenyl]-8-
chloro-7-(methylpropylamino)-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473547-00-1P 473547-01-2P 473547-02-3P, 8-Chloro-4-[3-[4-
(hydroxymethyl)thiazol-2-yl]phenyl]-7-(isobutylmethylamino)-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473547-03-4P, 8-Chloro-7-
dimethylamino-4-[3-(2-ethylaminothiazol-4-yl)phenyl]-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473547-04-5P, 7-Dimethylamino-4-[3-[5-
(hydroxymethyl)-1.3.4-thiadiazol-2-yl]phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473547-05-6P. 7-Dimethylamino-4-[3-(2-
methyl-5-propyloxazol-4-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473547-06-7P
                                                   473550-20-8P.
8-Chloro-7-dimethylamino-4-[3-(1,2,3-triazol-\frac{1}{2}-yl)phenyl]-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-22-0P, 7-Dimethylamino-8-
phenylethynyl-4-[3-(1,2,3-triazol-1-yl)phenyl]-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-23-1P, 8-Chloro-7-
dimethylamino-4-[3-(3-methylisoxazol-5-yl)phenyl]-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-24-2P, 8-(2,3-Difluorophenyl)-
7-dimethylamino-4-[3-[5-(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-25-3P, 3-[7-(2.3-
Difluorophenyl)-8-dimethylamino-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepin-
2-y1]benzonitrile 473550-26-4P, 8-Chloro-7-dimethylamino-4-[2-(3-
methylisoxazol-5-yl)pyridin-4-yl]-1.3-dihydrobenzo[b][1,4]diazepin-2-one
473550-27-5P, 8-Chloro-7-[(2-methoxyethyl)(methyl)amino]-4-[2-(3-
methylisoxazol-5-yl)pyridin-4-yl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473550-28-6P, 8-Chloro-4-[3-[5-(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-
7-[(2-methoxyethyl)(methyl)amino]-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473550-29-7P. 8-Chloro-7-[(2-methoxyethyl)(methyl)amino]-4-[3-(1,2,3-
triazol-1-yl)phenyl]-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473550-30-0P, 4-[7-Chloro-8-dimethylamino-4-oxo-4.5-dihydro-3H-
benzo[b][1,4]diazepin-2-yl]pyridine-2-carbonitrile 473550-33-3P.
7-Dimethylamino-4-[3-(3-methylisoxazol-5-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-35-5P 473550-36-6P.
8-Chloro-7-dimethylamino-4-[3-(3-methoxymethylisoxazol-5-yl)phenyl]-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-37-7P, 4-[8-Dimethylamino-4-
oxo-7-trifluoromethyl-4,5-dihydro-3H-benzo[b][1,4]diazepin-2-yl]pyridine-2-
carbonitrile 473550-38-8P, 8-(2-Fluorophenyl)-4-[3-(imidazol-1-
yl)phenyl]-7-(2,2,2-trifluoroethoxy)-1,3-dihydrobenzo[b][1,4]diazepin-2-
one 473550-41-3P, 8-(2-Fluorophenyl)-4-[3-(1,2,3-triazol-1-yl)phenyl]-7-
(2,2,2-trifluoroethoxy)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473550-42-4P, 8-(2-Fluorophenyl)-4-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-
yl]phenyl]-7-(2,2,2-trifluoroethoxy)-1.3-dihydrobenzo[b][1,4]diazepin-2-
      473550-43-5P 473550-44-6P. 8-Chloro-7-dimethylamino-4-[3-(3-
hydroxymethylisoxazol-5-yl)phenyl]-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473550-45-7P, 7-Dimethylamino-4-[3-(2-methyl-2H-pyrazol-3-yl)phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-46-8P
473550-47-9P, 8-Chloro-7-dimethylamino-4-[3-(4-hydroxymethyl-3-
methylisoxazol-5-yl)phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473550-48-0P 473550-49-1P 473550-50-4P, 8-Chloro-7-dimethylamino-4-[3-
(5-hydroxymethyl-2-methyl-2H-pyrazol-3-yl)phenyl]-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-51-5P. 4-(4-0xo-8-(pyrrolidin-
1-yl)-7-trifluoromethyl-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)pyridine-
2-carbonitrile 473550-52-6P, 4-[3-[5-(Hydroxymethyl)-1,2,3-triazol-1-
yl]phenyl]-7-(pyrrolidin-1-yl)-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-53-7P. 7-Dimethylamino-8-
fluoro-4-[3-[5-(hydroxymethyl)-1.2,3-triazol-1-yl]phenyl]-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-54-8P 473550-55-9P.
7-Dimethylamino-8-fluoro-4-[3-(3-hydroxymethylisoxazol-5-yl)phenyl]-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-56-0P, 8-Chloro-7-
dimethylamino-4-[3-[5-(pyrrolidin-1-ylmethyl)-1.2.3-triazol-1-yl]phenyl]-
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1,3-dihydrobenzo[b][1,4]diazepin-2-one 473550-58-2P.
7-Dimethylamino-8-fluoro-4-[3-(3-methylisoxazol-5-yl)phenyl]-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-60-6P.
4-[3-[5-(Azetidin-1-ylmethyl)-1.2.3-triazol-1-yl]phenyl]-8-chloro-7-
dimethylamino-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-61-7P.
8-Chloro-7-dimethylamino-4-[3-(5-hydroxymethylisoxazol-3-yl)phenyl]-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-62-8P, 8-Chloro-4-[3-[5-
(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-7-(piperidin-1-yl)-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-63-9P, 7-Dimethylamino-4-[3-(5-
hydroxymethylisoxazol-3-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-64-0P. 7-Dimethylamino-4-[3-[3-
(pyrrolidin-1-ylmethyl)isoxazol-5-yl]phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-65-1P 473550-66-2P.
4-[7-Fluoro-4-oxo-8-(pyrrolidin-1-yl)-4.5-dihydro-3H-benzo[b][1.4]diazepin-
2-y1]pyridine-2-carbonitrile 473550-67-3P, 8-Fluoro-4-[3-(3-
methylisoxazol-5-yl)phenyl]-7-(pyrrolidin-1-yl)-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-68-4P, 8-Fluoro-4-[3-[5-
(hydroxymethyl)-1.2.3-triazol-1-yl]phenyl]-7-(pyrrolidin-1-yl)-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473550-69-5P. 4-[8-(Azetidin-1-y1)-7-
chloro-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl]pyridine-2-
carbonitrile 473550-70-8P, 4-[3-(5-Hydroxymethylisoxazol-3-yl)phenyl]-7-
(pyrrolidin-1-yl)-8-trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473550-71-9P, 4-[8-(Azetidin-1-yl)-4-oxo-7-trifluoromethyl-4,5-dihydro-3H-
benzo[b][1,4]diazepin-2-yl]pyridine-2-carbonitrile 473550-72-0P.
7-(Azetidin-1-yl)-4-[3-(3-methylisoxazol-5-yl)phenyl]-8-trifluoromethyl-
1,3-dihydrobenzo[b][1,4]diazepin-2-one 473550-73-1P.
7-(Azetidin-1-yl)-4-[3-[5-(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-74-2P.
7-Dimethylamino-4-[3-(pyrazol-1-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-75-3P, 7-Dimethylamino-4-[3-
(imidazol-1-yl)phenyl]-8-trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-
        473550-76-4P. 8-Chloro-7-dimethylamino-4-[3-(4-
hydroxymethylpyrazol-1-yl)phenyl]-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473550-78-6P. 7-Dimethylamino-4-[3-(4-hydroxymethyl-3-methylisoxazol-5-
yl)phenyl]-8-trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473550-79-7P, 7-Dimethylamino-4-[3-(4-hydroxymethylisoxazol-3-yl)phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-80-0P.
7-Dimethylamino-4-[3-(4-hydroxymethyl-2-methyl-2H-pyrazol-3-yl)phenyl]-8-
trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473550-81-1P.
8-Chloro-7-dimethylamino-4-[3-(1,2,4-triazol-1-yl)phenyl]-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-82-2P. 7-Dimethylamino-4-[3-
(1,2,4-triazol-1-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-83-3P, 3-(8-Dimethylamino-4-
oxo-7-trifluoromethyl-4.5-dihydro-3H-benzo[b][1,4]diazepin-2-
yl)benzonitrile 473550-84-4P, 7-Dimethylamino-4-[3-[5-[(2.2.2-
trifluoroethylamino)methyl]-1,2,3-triazol-1-yl]phenyl]-8-trifluoromethyl-
1.3-dihydrobenzo[b][1.4]diazepin-2-one 473550-86-6P 473550-87-7P
473550-88-8P, 7-Dimethylamino-4-[3-[2-(2-hydroxyethyl)-2H-pyrazol-3-
yl]phenyl]-8-trifluoromethyl-1.3-dihydrobenzo[b][1,4]diazepin-2-one
473550-89-9P 473550-90-2P, 7-Dimethylamino-8-(2-fluorophenyl)-4-[3-
(1.2.3-triazol-1-yl)phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473550-91-3P. 7-Dimethylamino-4-[3-[5-(2-hydroxyethyl)-1,2,3-triazol-1-
yl]phenyl]-8-trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473550-92-4P. 7-Dimethylamino-4-[3-[5-(hydroxymethyl)pyrazol-1-yl]phenyl]-
8-trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473550-93-5P.
7-Dimethylamino-4-[3-(1,2,3-triazol-1-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473550-94-6P. 3-(8-Dimethylamino-7-
methyl-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-yl)benzonitrile
473550-95-7P, 7-Dimethylamino-4-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-
yl]phenyl]-8-methyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one 473550-96-8P.
2-(3-Cyanophenyl)-8-dimethylamino-4-oxo-4.5-dihydro-3H-
benzo[b][1.4]diazepine-7-carbonitrile 473550-97-9P. 4-[3-[5-
(Hydroxymethyl)-1.2.3-triazol-1-yl]phenyl]-8-methyl-7-(methylpropylamino)-
1,3-dihydrobenzo[b][1,4]diazepin-2-one 473550-98-0P 473550-99-1P.
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8-Dimethylamino-2-[3-[5-(hydroxymethyl)-1.2.3-triazol-1-yl]phenyl]-4-oxo-
4.5-dihydro-3H-benzo[b][1.4]diazepine-7-carbonitrile 473551-01-8P.
8-Methyl-4-[3-(3-methylisoxazol-5-yl)phenyl]-7-(methylpropylamino)-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473551-02-9P. 8-Dimethylamino-2-[3-(3-
methylisoxazol-5-yl)phenyl]-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepine-7-
carbonitrile 473551-03-0P 473551-04-1P, 7-Dimethylamino-8-methyl-4-[3-
(3-methylisoxazol-5-yl)phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473551-05-2P 473551-06-3P, 2-[3-[5-(Hydroxymethyl)-1,2,3-triazol-1-
yl]phenyl]-4-oxo-8-(pyrrolidin-1-yl)-4.5-dihydro-3H-benzo[b][1.4]diazepine-
7-carbonitrile 473551-07-4P, 2-[3-(3-Methylisoxazol-5-yl)phenyl]-4-oxo-8-
(pyrrolidin-1-yl)-4.5-dihydro-3H-benzo[b][1.4]diazepine-7-carbonitrile
473551-08-5P 473551-09-6P 473551-10-9P 473551-11-0P 473551-12-1P
473551-14-3P, 2-[3-(3-Methylisoxazol-5-yl)phenyl]-4-oxo-8-(piperidin-1-yl)-
4.5-dihydro-3H-benzo[b][1.4]diazepine-7-carbonitrile 473551-15-4P.
8-Chloro-7-isobutylamino-4-[3-(3-methylisoxazol-5-yl)phenyl]-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473551-16-5P, 8-Chloro-4-[3-[5-
(hydroxymethyl)-1.2,3-triazol-1-yl]phenyl]-7-isobutylamino-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473551-17-6P 473551-18-7P
473551-20-1P 473551-22-3P 473551-23-4P 473551-24-5P 473551-25-6P.
8-Chloro-4-[3-[5-[(isopropylmethylamino)methyl]-1,2,3-triazol-1-yl]phenyl]-
7-(methylpropylamino)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
                                                          473551-30-3P.
473551-26-7P 473551-27-8P 473551-28-9P 473551-29-0P
4-[3-[5-(Azetidin-1-ylmethyl)-1.2.3-triazol-1-yl]phenyl]-8-chloro-7-
(isopropylmethylamino)-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473551-31-4P. 4-[3-[5-(Azetidin-1-ylmethyl)-1.2.3-triazol-1-yl]phenyl]-8-
chloro-7-(isobuty]methylamino)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473551-32-5P 473551-34-7P, 4-[3-[5-(Hydroxymethyl)-1.2.3-triazol-1-
yl]phenyl]-8-methyl-7-(pyrrolidin-1-yl)-1,3-dihydrobenzo[b][1,4]diazepin-2-
     473551-35-8P
                   473551-36-9P. 8-Methyl-4-[3-(3-methylisoxazol-5-
yl)phenyl]-7-(pyrrolidin-1-yl)-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473551-37-0P
                                                           473551-41-6P
              473551-38-1P 473551-39-2P 473551-40-5P
              473551-43-8P
                             473551-44-9P
                                           473551-45-0P
                                                           473551-46-1P
473551-42-7P
473551-47-2P
              473551-48-3P
                             473551-49-4P 473551-50-7P.
8-Chloro-4-[3-[5-[(isobuty]methy]amino)methy]-1,2,3-triazol-1-yl]phenyl]-
7-(isopropylmethylamino)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
                            473551-53-0P 473551-54-1P
473551-58-5P 473551-59-6P
473551-51-8P 473551-52-9P
473551-56-3P
              473551-57-4P
                                                           473551-60-9P
473551-62-1P, 8-Chloro-7-isopropylamino-4-[3-(3-methylisoxazol-5-
yl)phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473551-63-2P.
8-Chloro-4-[3-[5-(hydroxymethyl)-1,2,3-triazol-1-yl]phenyl]-7-
isopropylamino-1.3-dihydrobenzo[b][1.4]diazepin-2-one
                                                      473551-65-4P
                                            473551-69-8P
                                                           473551-70-1P
473551-66-5P
             473551-67-6P
                             473551-68-7P
473551-71-2P
              473551-72-3P
                             473551-73-4P
                                            473551-74-5P
                                                           473551-75-6P
473551-76-7P. 4-[3-(Imidazol-1-yl)phenyl]-7-isobutylamino-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473551-77-8P.
8-Chloro-4-[3-(imidazol-1-yl)phenyl]-7-isobutylamino-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473551-78-9P. 8-Chloro-7-
(isobutylamino)-4-[3-(1,2,3-triazol-1-yl)phenyl]-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473551-79-0P. 7-(Isobutylamino)-4-[3-
(1.2.3-triazol-1-yl) phenyl]-8-trifluoromethyl-1.3-\\
dihydrobenzo[b][1,4]diazepin-2-one 473551-80-3P, 8-Chloro-7-
(isobutylamino)-4-[3-(1,2,4-triazol-1-yl)phenyl]-1,3-
dihydrobenzo[b][1.4]diazepin-2-one 473551-81-4P, 7-(Isobutylamino)-4-[3-
(1,2,4-triazol-1-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473551-82-5P
                                                  473551-83-6P.
8-Chloro-4-[3-[4-(hydroxymethyl)thiazol-2-yl]phenyl]-7-(methylpropylamino)-
1,3-dihydrobenzo[b][1,4]diazepin-2-one 473551-84-7P.
8-Chloro-4-[3-[4-(hydroxymethyl)thiazol-2-yl]phenyl]-7-
(isopropylmethylamino)-1.3-dihydrobenzo[b][1,4]diazepin-2-one
473551-85-8P 473551-86-9P. 8-Chloro-4-[3-[4-(hydroxymethyl)oxazol-2-
yl]phenyl]-7-(methylpropylamino)-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473551-87-0P. 8-Chloro-4-[3-[4-(hydroxymethyl)oxazol-2-yl]phenyl]-7-
(isopropylmethylamino)-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473551-88-1P. 8-Chloro-4-[3-[4-(hydroxymethyl)oxazol-2-yl]phenyl]-7-
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(isobuty|methy|amino)-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473551-89-2P 473551-91-6P, 8-Chloro-7-dimethylamino-4-[3-[4-(morpholin-4-
ylmethyl)thiazol-2-yl]phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473551-92-7P. 8-Chloro-7-dimethylamino-4-[3-(2-hydroxymethylthiazol-4-
yl)phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473551-94-9P.
4-[3-(2-Aminothiazol-4-yl)phenyl]-8-chloro-7-dimethylamino-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473551-95-0P. N-[4-[3-(7-Chloro-8-
dimethylamino-4-oxo-4.5-dihydro-3H-benzo[b][1.4]diazepin-2-
yl)phenyl]thiazol-2-yl]guanidine 473551-96-1P. 8-Chloro-7-dimethylamino-
4-[3-[2-(pyridin-4-ylamino)thiazol-4-yl]phenyl]-1.3-
                                     473551-97-2P, 8-Chloro-4-[3-(2-
dihydrobenzo[b][1.4]diazepin-2-one
methyloxazol-4-yl)phenyl]-7-(methylpropylamino)-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473551-98-3P, 4-[3-[4-
(Hydroxymethyl)thiazol-2-yl]phenyl]-8-methyl-7-(methylpropylamino)-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473551-99-4P, 4-[3-[4-
(Hydroxymethyl) oxazol-2-yl] phenyl]-8-methyl-7-(methylpropylamino)-1.3-\\
dihydrobenzo[b][1,4]diazepin-2-one 473552-00-0P, 7-Dimethylamino-4-[3-[4-
(hydroxymethyl) thiazol-2-yl] phenyl]-8-trifluoromethyl-1.3-\\
dihydrobenzo[b][1.4]diazepin-2-one 473552-01-1P.
7-Dimethylamino-4-[3-[4-(hydroxymethyl)oxazol-2-yl]phenyl]-8-
trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one 473552-02-2P
473552-03-3P, 7-Dimethylamino-4-[3-[5-(2-hydroxyethyl)-1.3.4-thiadiazol-2-
yl]phenyl]-8-trifluoromethyl-1,3-dihydrobenzo[b][1,4]diazepin-2-one
473552-04-4P, 7-Dimethylamino-4-[3-[5-(hydroxymethyl)-1,3,4-oxadiazol-2-
yl]phenyl]-8-trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one
473552-05-5P, 7-Dimethylamino-4-[3-[5-(2-hydroxyethyl)-1,3,4-oxadiazol-2-
yl]phenyl]-8-trifluoromethyl-1,3-dihydrobenzo[b][1.4]diazepin-2-one
473552-06-6P. 7-Dimethylamino-4-[3-(oxazol-4-yl)phenyl]-8-trifluoromethyl-
1,3-dihydrobenzo[b][1,4]diazepin-2-one 473552-07-7P.
7-Dimethylamino-4-[3-(thiazol-4-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-08-8P, 7-Dimethylamino-4-[3-(2-
methyloxazol-4-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1.4]diazepin-2-one
                                     473552-09-9P, 7-Dimethylamino-4-[3-(5-
methyloxazol-4-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-10-2P, 7-Dimethylamino-4-[3-(5-
methylthiazol-4-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-11-3P, 7-Dimethylamino-4-[3-
(2,5-dimethylthiazol-4-yl)phenyl]-8-trifluoromethyl-1,3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-12-4P, 7-Dimethylamino-4-[3-(2-
hydroxymethylthiazol-4-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-14-6P, 7-Dimethylamino-4-[3-(2-
hydroxymethyl-5-methylthiazol-4-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-15-7P, 7-Dimethylamino-4-[3-(2-
hydroxymethyl-5-propylthiazol-4-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1.4]diazepin-2-one 473552-17-9P, 7-Dimethylamino-4-[3-(5-
hydroxymethyl-2-methylthiazol-4-yl)phenyl]-8-trifluoromethyl-1.3-
dihydrobenzo[b][1,4]diazepin-2-one 473552-19-1P
7-Dimethylamino-4-[3-(2-isopropyl-1H-imidazol-4-yl)phenyl]-8-
trifluoromethyl-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473552-21-5P.
8-Chloro-7-dimethylamino-4-[3-[5-(2-hydroxyethyl)-1,3,4-thiadiazol-2-
yl]phenyl]-1.3-dihydrobenzo[b][1.4]diazepin-2-one 473553-35-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
   (mGluR2 antagonist: preparation of benzodiazepinone mGluR2 antagonists by
   coupling benzenediamines with dioxinones or oxopropanoates followed by
   cyclization)
75-31-0. Isopropylamine. reactions 78-67-1, .alpha...alpha.'-
Azobis(isobutyronitrile)
                          78-81-9, Isobutylamine 78-84-2.
2-Methylpropionaldehyde 106-95-6, Allyl bromide, reactions
                                                              108-22-5.
Isopropenyl acetate 109-84-2, 2-Hydroxyethylhydrazine 109-89-7.
N.N-Diethylamine, reactions 110-87-2, Dihydropyran 110-89-4,
Piperidine, reactions 110-91-8, Morpholine, reactions 123-75-1
Pyrrolidine. reactions 149-73-5. Trimethyl orthoformate 503-29-7.
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Azetidine 534-07-6. 1.3-Dichloro-2-propanone 536-74-3. Phenylacetylene
    624-78-2, N-Ethylmethylamine 625-43-4, N-Isobutyl-N-methylamine
    625-53-6, N-Ethylthiourea 627-35-0, N-Methylpropylamine 765-30-0.
    Cyclopropylamine 1003-03-8, Cyclopentylamine 1459-93-4, Dimethyl
    isophthalate 1635-61-6. 5-Chloro-2-nitroaniline 1711-11-1.
    3-Cyanobenzoyl chloride 1993-03-9, 2-Fluorophenylboronic acid
    2516-47-4. Cyclopropylmethylamine 4747-21-1, N-Isopropyl-N-methylamine
    6148-64-7. Ethyl malonate potassium salt 6641-64-1. 4.5-Dichloro-2-
    nitroaniline 7149-80-6, 5-Chloro-4-methyl-2-nitroaniline 7252-53-1.
    Cyclopropylmethylamine hydrochloride 13531-48-1. Methyl 3-cyanobenzoate
    18457-04-0. Bis(trimethylsilyl)malonate 20914-88-9. 3-
    Hydroxypropionimidic acid ethyl ester hydrochloride 26196-45-2.
    5-Chloro-2-nitro-1.4-phenylenediamine 32016-27-6. 2-Cyano-3-
    ethoxyacrylic acid benzyl ester 35375-74-7. 5-Chloro-2-nitro-4-
    trifluoromethylphenylamine 36743-66-5 36805-97-7 38235-71-1.
    3-Hydrazinobenzoic acid 38256-93-8, N-(2-Methoxyethyl)methylamine
    53503-61-0, Lithium tert-butyl acetate 58481-14-4. 2-Cyano-isonicotinic
    acid ethyl ester 62088-13-5 62423-73-8, 3-(2-Bromoacetyl)benzoic acid
    67704-17-0. 3-Hydrazinocarbonylbenzoic acid methyl ester 67751-14-8.
    4-Dimethylamino-2-oxobut-3-enoic acid ethyl ester 75486-33-8
    77335-18-3 81962-58-5. 3-Chloro-4-fluoro-6-nitroacetanilide
    93066-93-4. Methyl 3-azidobenzoate 106748-24-7, 3-Carbamoylbenzoic acid
    methyl ester 106748-27-0. 3-Thiocarbamoylbenzoic acid methyl ester
    121219-16-7, 2,3-Difluorophenylboronic acid 135294-85-8.
    tert-Butyldimethyl[3-(tetrahydropyran-2-yloxy)prop-1-ynyl]silane
    143151-03-5, 4-Cyano-5-fluoro-2-nitroaniline 163852-04-8.
    1-(3-Bromophenyl)-3-dimethylaminopropenone 164670-44-4.
    1-(4-Pyridyl)thiourea 167626-26-8, 3-Hydrazinobenzoic acid methyl ester
    hydrochloride 168618-35-7. 3-(Pyrazol-1-yl)benzoic acid methyl ester
    175204-79-2. 2-(tert-Butylcarbonyloxy)thioacetamide 335255-82-8.
    3-(1,2,3-Triazol-1-yl)benzoic acid 335255-85-1, Methyl
    3-(1H-imidazol-1-yl)benzoate 335256-01-4 335256-04-7, Ethyl
    3-(3-methylisoxazol-5-yl)benzoate 335256-35-4 335351-27-4
    428871-73-2. 5-Fluoro-2-nitro-4-trifluoromethylphenylamine 473537-83-6.
    2-(3-Methylisoxazol-5-yl)isonicotinic acid methyl ester 473537-85-8.
    3-(2-Methyl-2H-pyrazol-3-yl)benzoic acid methyl ester 473537-87-0
    473537-89-2, Methyl 3-(3-methoxymethylisoxazol-5-yl)benzoate 473537-92-7
    473537-96-1, 3-[5-(Tetrahydropyran-2-yloxymethyl)isoxazol-3-yl]benzoic
    acid methyl ester 473547-09-0, 4-Iodo-2-nitro-5-(2,2,2-
    trifluoroethoxy)phenylamine 473547-56-7 473548-02-6.
    3-[3-Methyl-4-(tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]benzoic acid
    methyl ester 473548-16-2, 3-[4-(Tetrahydropyran-2-yloxymethyl)isoxazol-3-
    yl]benzoic acid methyl ester 473548-21-9, 3-[2-Methyl-4-(tetrahydropyran-
    2-yloxymethyl)-2H-pyrazol-3-yl]benzoic acid methyl ester 473548-29-7.
    3-[5-[2-(Tetrahydropyran-2-yloxy)ethyl]-1,2,3-triazol-1-yl]benzoic acid
    methyl ester 473548-42-4 473550-39-9, [2'-Fluoro-5-[[3-[3-(imidazol-1-
    yl)phenyl]-3-oxopropionyl]amino]-2-(2,2,2-trifluoroethoxy)biphenyl-4-
    yl]carbamic acid tert-butyl ester 473550-40-2.
    [2'-Fluoro-5-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-2-
    (2.2.2-trifluoroethoxy)biphenyl-4-yl]carbamic acid tert-butyl ester
    473550-59-3. [5-Dimethylamino-4-fluoro-2-[[3-[3-(3-methylisoxazol-
    5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
    473552-16-8. 3-0xo-3-[3-[5-propy]-2-(tetrahydropyran-2-yloxymethyl)thiazol-
    4-yl]phenyl]propionic acid tert-butyl ester
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of benzodiazepinone mGluR2 antagonists by coupling
       benzenediamines with dioxinones or oxopropanoates followed by
       cyclization)
IT 167626-27-9, Methyl 3-(1H-1,2,4-triazol-1-yl)benzoate
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (reactant; preparation of benzodiazepinone mGluR2 antagonists by coupling
       benzenediamines with dioxinones or oxopropanoates followed by
       cyclization)
RE.CNT 3
             THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
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(1) Hoffmann La Roche; WO 0129011 A 2001 HCAPLUS
(2) Hoffmann La Roche: WO 0129012 A 2001 HCAPLUS
(3) Pajouhesh. H: WO 0110846 A 2001 HCAPLUS
   473548-87-7P. [4-Chloro-5-dimethylamino-2-[[3-[3-(3-methylisoxazol-
    5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
    473548-97-9P 473549-07-4P. [5-Dimethylamino-2-[[3-[3-(3-
    methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-4-
    trifluoromethylphenyl]carbamic acid tert-butyl ester 473549-09-6P
     . [4-Chloro-5-dimethylamino-2-[[3-[3-(3-methoxymethylisoxazol-5-yl)phenyl]-
     3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
    473549-12-1P 473549-18-7P, [4-Chloro-5-dimethylamino-2-
     [[3-oxo-3-[3-[3-(tetrahydropyran-2-vloxymethyl)isoxazol-5-
    yl]phenyl]propionyl]amino]phenyl]carbamic acid tert-butyl ester
    473549-21-2P. [4-Chloro-5-dimethylamino-2-[[3-[3-[3-methyl-4-
     (tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]phenyl]-3-
    oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
     473549-29-0P, [5-Dimethylamino-4-fluoro-2-[[3-oxo-3-[3-[3-
     (tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]phenyl]propionyl]amino]phenyl
     ]carbamic acid tert-butyl ester 473549-30-3P.
     [5-Dimethylamino-2-[[3-oxo-3-[3-[3-(tetrahydropyran-2-yloxymethyl)isoxazol-
     5-yl]phenyl]propionyl]amino]-4-trifluoromethylphenyl]carbamic acid
     tert-butyl ester 473549-36-9P. [4-Fluoro-2-[[3-[3-(3-
    methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-(pyrrolidin-1-
    yl)phenyl]carbamic acid tert-butyl ester 473549-41-6P.
     [5-(Azetidin-1-yl)-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
     oxopropionyl]amino]-4-trifluoromethylphenyl]carbamic acid tert-butyl ester
     473549-48-3P. [5-Dimethylamino-2-[[3-[3-[3-methyl-4-
     (tetrahydropyran-2-yloxymethyl)isoxazol-5-yl]phenyl]-3-oxopropionyl]amino]-
     4-trifluoromethylphenyl]carbamic acid tert-butyl ester
     473549-72-3P, [4-Methyl-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
     oxopropionyl]amino]-5-(methylpropylamino)phenyl]carbamic acid tert-butyl
     ester 473549-73-4P. [4-Cyano-5-dimethylamino-2-[[3-[3-(3-
    methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid
     tert-butyl ester 473549-74-5P 473549-75-6P.
     [5-Dimethylamino-4-methyl-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
     oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
     473549-77-8P 473549-79-0P, [4-Cyano-2-[[3-[3-(3-
    methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-(pyrrolidin-1-
    yl)phenyl]carbamic acid tert-butyl ester 473549-81-4P.
     [4-Cyano-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-
     (methylpropylamino)phenyl]carbamic acid tert-butyl ester
     473549-82-5P. [4-Cyano-5-diethylamino-2-[[3-[3-(3-methylisoxazol-5-
     yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
     473549-83-6P 473549-85-8P 473549-87-0P.
     [4-Cyano-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-
     (piperidin-1-v1)phenyl]carbamic acid tert-butyl ester 473549-88-1P
     . [4-Chloro-5-isobutylamino-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
     oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
     473549-91-6P 473549-93-8P 473549-95-0P
     473549-97-2P 473549-99-4P. [4-Methyl-2-[[3-[3-(3-
     methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-5-(pyrrolidin-1-
     yl)phenyl]carbamic acid tert-butyl ester 473550-00-4P.
     [4-Chloro-5-isopropylamino-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-
     oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
       (intermediate; preparation of benzodiazepinone mGluR2 antagonists by
       coupling benzenediamines with dioxinones or oxopropanoates followed by
       cyclization)
    473548-87-7 HCAPLUS
    Carbamic acid. [4-chloro-5-(dimethylamino)-2-[[3-[3-(3-methyl-5-
     isoxazolyl)phenyl]-1.3-dioxopropyl]amino]phenyl]-. 1.1-dimethylethyl ester
     (9CI) (CA INDEX NAME)
```

RN 473548-97-9 HCAPLUS

CN Carbamic acid. [4-chloro-5-[(2-methoxyethyl)methylamino]-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]phenyl]-.

1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{O} \\ \text{CH}_2 - \text{CH}_2$$

RN 473549-07-4 HCAPLUS

CN Carbamic acid. [5-(dimethylamino)-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]-4-(trifluoromethyl)phenyl]-. 1,1-dimethylethylester (9CI) (CA INDEX NAME)

RN 473549-09-6 HCAPLUS

CN Carbamic acid. [4-chloro-5-(dimethylamino)-2-[[3-[3-[3-(methoxymethyl)-5-isoxazolyl]phenyl]-1,3-dioxopropyl]amino]phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-12-1 HCAPLUS

CN Carbamic acid. [2'-fluoro-5-[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]-2-(2.2.2-trifluoroethoxy)[1.1'-biphenyl]-4-yl]-.

1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-18-7 HCAPLUS

CN Carbamic acid. [4-chloro-5-(dimethylamino)-2-[[1.3-dioxo-3-[3-[3-[(tetrahydro-2H-pyran-2-yl)oxy]methyl]-5-isoxazolyl]phenyl]propyl]amino]phenyl]- 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-21-2 HCAPLUS

CN Carbamic acid. [4-chloro-5-(dimethylamino)-2-[[3-[3-[3-methyl-4-[[(tetrahydro-2H-pyran-2-yl)oxy]methyl]-5-isoxazolyl]phenyl]-1.3dioxopropyl]amino]phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-29-0 HCAPLUS

CN Carbamic acid. [5-(dimethylamino)-2-[[1.3-dioxo-3-[3-[3-[(tetrahydro-2H-pyran-2-yl)oxy]methyl]-5-isoxazolyl]phenyl]propyl]amino]-4-fluorophenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-30-3 HCAPLUS

CN Carbamic acid. [5-(dimethylamino)-2-[[1.3-dioxo-3-[3-[3-[[(tetrahydro-2H-

pyran-2-yl)oxy]methyl]-5-isoxazolyl]phenyl]propyl]amino]-4-(trifluoromethyl)phenyl]-, 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-36-9 HCAPLUS

RN 473549-41-6 HCAPLUS

CN Carbamic acid. [5-(1-azetidinyl)-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]-4-(trifluoromethyl)phenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-48-3 HCAPLUS

CN Carbamic acid. [5-(dimethylamino)-2-[[3-[3-[3-methyl-4-[[(tetrahydro-2H-pyran-2-yl)oxy]methyl]-5-isoxazolyl]phenyl]-1,3-dioxopropyl]amino]-4-(trifluoromethyl)phenyl]-. 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-72-3 HCAPLUS

CN Carbamic acid, [4-methyl-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-

 $\label{lem:dioxopropylamino} $$\operatorname{dioxopropylamino}$ - (methylpropylamino) phenyl]-, 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)$

RN 473549-73-4 HCAPLUS

CN Carbamic acid, [4-cyano-5-(dimethylamino)-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]phenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-74-5 HCAPLUS

CN Carbamic acid. [5-(ethylmethylamino)-4-methyl-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{NH} \\ \text{NH} \\ \text{NH} \\ \text{C} \\ \text{OBu-t} \\ \end{array}$$

RN 473549-75-6 HCAPLUS

CN Carbamic acid. [5-(dimethylamino)-4-methyl-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-77-8 HCAPLUS

CN Carbamic acid. [4-chloro-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-[methyl(2-methylpropyl)amino]phenyl]-.
1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-79-0 HCAPLUS

CN Carbamic acid. [4-cyano-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-(1-pyrrolidinyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-81-4 HCAPLUS

CN Carbamic acid. [4-cyano-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]-5-(methylpropylamino)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-82-5 HCAPLUS

CN Carbamic acid. [4-cyano-5-(diethylamino)-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473549-83-6 HCAPLUS

CN Carbamic acid, [4-cyano-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-[methyl(1-methylethyl)amino]phenyl]-.
1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-85-8 HCAPLUS
- CN Carbamic acid. [4-cyano-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-[methyl(2-methylpropyl)amino]phenyl]-.
 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-87-0 HCAPLUS
- CN Carbamic acid. [4-cyano-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-(1-piperidinyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-88-1 HCAPLUS
- CN Carbamic acid. [4-chloro-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]-5-[(2-methylpropyl)amino]phenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-91-6 HCAPLUS
- CN Carbamic acid. [2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-(methylpropylamino)-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-93-8 HCAPLUS
- CN Carbamic acid. [2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-[methyl(2-methylpropyl)amino]-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA_INDEX_NAME)

- RN 473549-95-0 HCAPLUS
- CN Carbamic acid. [2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-[methyl(1-methylethyl)amino]-4-(trifluoromethyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-97-2 HCAPLUS
- CN Carbamic acid. [4-methyl-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3dioxopropyl]amino]-5-[methyl(2-methylpropyl)amino]phenyl]-.
 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473549-99-4 HCAPLUS
- CN Carbamic acid. [4-methyl-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-5-(1-pyrrolidinyl)phenyl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

- RN 473550-00-4 HCAPLUS
- CN Carbamic acid. [4-chloro-5-[(1-methylethyl)amino]-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]phenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

- IT 473550-40-2. [2'-Fluoro-5-[[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]-2-(2.2.2-trifluoroethoxy)biphenyl-4-yl]carbamic acid tert-butyl ester 473550-59-3. [5-Dimethylamino-4-fluoro-2-[[3-[3-(3-methylisoxazol-5-yl)phenyl]-3-oxopropionyl]amino]phenyl]carbamic acid tert-butyl ester
 - RL: RCT (Reactant): RACT (Reactant or reagent)
 (preparation of benzodiazepinone mGluR2 antagonists by coupling benzenediamines with dioxinones or oxopropanoates followed by cyclization)
- RN 473550-40-2 HCAPLUS
- CN Carbamic acid, [2'-fluoro-5-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino]-2-(2.2.2-trifluoroethoxy)[1.1'-biphenyl]-4-yl]-.
 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 473550-59-3 HCAPLUS

CN Carbamic acid. [5-(dimethylamino)-4-fluoro-2-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino]phenyl]-. 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

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L17 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
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AN 2002:72091 HCAPLUS

DN 136:134566

ED Entered STN: 25 Jan 2002

TI Synthesis and use of heteroaryl-substituted-aryloxyalkylaryl compounds as .beta.3-adrenergic agonists

IN Evers. Britta: Jesudason. Cynthia Darshini: Karanjawala, Rushad Eruch; Remick. David Michael: Ruehter. Gerd: Sall. Daniel Jon: Schotten. Theo; Siegel. Miles Goodman: Stenzel, Wolfgang: Stucky, Russell Dean: Werner. John Arnold

PA Eli Lilly and Company, USA

SO PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D409-12

ICS C07D401-12: C07D413-12: C07D213-82: C07D405-12: C07D407-12: C07D409-14: C07D417-12: A61K031-44: C07D409-12: C07D333-00:

C07D213-00; C07D405-12; C07D303-00; C07D231-00

CC 25-10 (Benzene. Its Derivatives, and Condensed Benzenoid Compounds) Section cross-reference(s): 1. 63

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		PATENT	NO.		KIND) (DATE			APPL:	ICAT	ION	NO.		D/	ATE	
	PI WO 2002006276				A1 20020124			WO 2001-US16519					20010709				
		W:	AE. AG.	AL.	AM.	AT,	AU.	AZ.	BA.	BB,	BG.	BR.	BY,	ΒZ,	CA.	CH,	CN,
			CO. CR.	CU.	CZ.	DE.	DK.	DM.	DZ.	EC.	EE,	ES.	FI.	GB,	GD.	GE.	GH.
			GM, HR,	HU.	ID.	IL.	IN,	IS,	JP.	KE.	KG.	KP.	KR,	KZ,	LC.	LK.	LR,
			LS. LT.	LU.	LV,	MA.	MD.	MG,	MK.	MN.	MW.	MX,	MZ,	NO.	NZ.	PL.	PT.
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			UZ. VN.	YU.	ZA,	ZW.	AM.	AZ.	BY.	KG.	KZ.	MD,	RU.	IJ,	TM		
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    MARPAT 136:134566
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
    Title compds. I [A1-3 = C, N] provided that only one of A1-3 can be
    nitrogen; Het = (un)substituted. optionally benzofused 5 or 6 membered
    heterocyclic ring; R1,1a,1b = H. halo, OH, alkyl, alkoxy, haloalkyl;
    SO2-alkyl; R2 = H, alkyl; R3 = H alkyl; R4 = H, alkyl; or R3 and R4
    combine with the carbon to which both are attached to form a C3-C6 cyclic
    ring; or R4 and X1 combine with the carbon to which both are attached to
    form a C3-C8 cyclic ring; or R4 combines with X1, the carbon to which both
    are attached, and the Ph group to which X1 is attached to form a
    benzofused cycloalkyl radical: X is OCH2, SCH2, bond: X1 = bond, divalent
    hydrocarbon moiety; X2 = 0, S, NH, NHSO2, SO2NH, CH2, bond; X3 =
    (un)substituted Ph. 5 or 6 membered heterocyclic ring] were prepared For
    instance, 2-(1-methylpyrazol-3-yl)phenol was reacted with (2S)-glycidyl
    3-nitrobenzenesulfonate (THF, t-BuOK, reflux, 16 h) to give epoxide II.
    This was reacted with the amine derived from 4-(2-amino-2-
    methylpropyl)phenol and 2-chloro-3-cyanopyridine (alc. solvent,
    80.degree.C. 2-72 h) to give III. The intrinsic activity (Emax) of
    representative compds. of the invention was assessed relative to
    isoproterenol (a nonselective .beta.3-agonist); III had Emax = 55.0%. I
    are used in the treatment of diabetes, obesity, etc.
    phenol thiophenol beta three adrenergic receptor agonist prepn
    Lipids, biological studies
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
       (lipolysis; synthesis and use of heteroaryl-substituted-
       aryloxyalkylaryl compds. as .beta.3-adrenergic agonists)
       (neurogenic; synthesis and use of heteroaryl-substituted-
       aryloxyalkylaryl compds. as .beta.3-adrenergic agonists)
    Diabetes mellitus
       (non-insulin-dependent; synthesis and use of heteroaryl-substituted-
       aryloxyalkylaryl compds. as .beta.3-adrenergic agonists)
IT Anticholesteremic agents
    Antidiabetic agents
    Antiobesity agents
    Energy metabolism, animal
    Hypolipemic agents
       (synthesis and use of heteroaryl-substituted-aryloxyalkylaryl compds.
       as .beta.3-adrenergic agonists)
   Glycerides, biological studies
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
       (synthesis and use of heteroaryl-substituted-aryloxyalkylaryl compds.
       as .beta.3-adrenergic agonists)
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0S GI

Inflammation

Antidepressants

Human

Lipoproteins

Adrenoceptor agonists

7683-59-2. Isoproterenol

compds. as .beta.3-adrenergic agonists)

RL: PAC (Pharmacological activity); BIOL (Biological study) (comparison: synthesis and use of heteroaryl-substituted-

IT

ΙT

Search done by Noble Jarrell

(.beta.3-; synthesis and use of heteroaryl-substituted-aryloxyalkylaryl

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aryloxyalkylaryl compds. as .beta.3-adrenergic agonists)
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
   (drug: synthesis and use of heteroaryl-substituted-aryloxyalkylaryl
   compds. as .beta.3-adrenergic agonists)
50-01-1. Guanidine hydrochloride 121-71-1 135-02-4.
2-Methoxybenzaldehyde 611-20-1, 2-Cyanophenol
                                                 1452-94-4, Ethyl
2-chloronicotinate 1692-15-5 1776-08-5 2160-62-5.
5-Bromothiophene-2-carbonitrile 2369-37-1, 3.4-Dibromofluorobenzene
4637-24-5 5106-98-9, 4-Chloro-2-hydroxybenzoic acid 5720-06-9.
2-Methoxybenzene boronic acid 6165-68-0 6165-69-1, Thiophene-3-boronic
acid 6602-54-6, 2-Chloro-3-cyanopyridine 7417-18-7 13331-23-2
14034-59-4 19438-10-9. Methyl 3-hydroxybenzoate 24065-33-6.
2-Chloro-5-carboxythiophene 32750-21-3, 2-Fluoro-6-iodoanisole
34810-67-8. 2-(Pyrazol-5-yl)phenol 36635-61-7. Tosylmethylisocyanide
51706-55-9
             53595-65-6 73781-91-6. Methyl 6-chloronicotinate
87059-79-8
             98437-23-1. (Benzothiophen-2-yl)boronic acid
                                                            98437-24-2
115314-14-2
              123532-22-9, 2-(1-Methylpyrazol-5-yl)phenol
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134598-00-8
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162607-20-7
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                   391928-09-9
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        (synthesis and use of heteroaryl-substituted-aryloxyalkylaryl compds.
        as .beta.3-adrenergic agonists)
    22353-82-8P, 2-Chloro-5-(carboxamido)thiophene 28177-50-6P
                                                                    31964-89-3P
     33567-59-8P. (2-Methoxyphenyl)acetaldehyde 50478-16-5P.
     2-Chloro-5-cyanothiophene 51449-77-5P 65103-28-8P 86723-62-8P
     123532-18-3P, 2-(1-Methylpyrazol-3-yl)phenol 340784-59-0P
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     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (synthesis and use of heteroaryl-substituted-aryloxyalkylaryl compds.
        as .beta.3-adrenergic agonists)
RE.CNT 13
             THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Beecham Group Plc: EP 0236624 A 1987 HCAPLUS
(2) Crowell, T; US 5808080 A 1998 HCAPLUS
(3) Droste, C; WO 9710825 A 1997 HCAPLUS
(4) Droste. C; US 5977154 A 1999 HCAPLUS
(5) Feng. D; WO 9746556 A 1997 HCAPLUS
(6) Mathvink. R: WO 9832753 A 1998 HCAPLUS
(7) Merck & Co Inc; EP 0611003 A 1994 HCAPLUS
(8) Merck & Co Inc: WO 9529159 A 1995 HCAPLUS
(9) Muehl. B: WO 9809625 A 1998 HCAPLUS
(10) Sankyo Co: EP 0678511 A 1995 HCAPLUS
(11) Shuker, A; TETRAHEDRON LETTERS 1997, V38(35), P6149 HCAPLUS
(12) Tanabe Seiyaku Co: FR 2447904 A 1980 HCAPLUS
(13) Weber. A; BIOORGANIC & MEDICINAL CHEMISTRY LETTERS 1998. V8(16). P2111
   HCAPLUS
    391920-14-2P 391920-78-8P
     RL: PAC (Pharmacological activity): SPN (Synthetic preparation): THU
     (Therapeutic use): BIOL (Biological study): PREP (Preparation): USES
     (Uses)
        (drug: synthesis and use of heteroaryl-substituted-aryloxyalkylaryl
        compds. as .beta.3-adrenergic agonists)
    391920-14-2 HCAPLUS
    3-Pyridinecarboxamide. 6-[4-[2-[[(2S)-2-hydroxy-3-[3-(5-
     isoxazolyl)phenoxy]propyl]amino]-2-methylpropyl]phenoxy]- (9CI) (CA INDEX
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RF

NAME)

Absolute stereochemistry.

PAGE 1-B

-NH2

RN 391920-78-8 HCAPLUS

CN 3-Pyridinecarboxamide, 2-[4-[2-[[(2S)-2-hydroxy-3-[3-(5-isoxazolyl)phenoxy]propyl]amino]-2-methylpropyl]phenoxy]- (9CI) (CA INDEX NAMF)

Absolute stereochemistry.

L17 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:653399 HCAPLUS

DN 135:344414

ED Entered STN: 07 Sep 2001

- TI Solid-Phase Synthesis of Isoxazoles Using Vinyl Ethers as Chameleon Catches
- AU Barrett, Anthony G. M.; Procopiou. Panayiotis A.; Voigtmann, Ulrike
- CS Department of Chemistry, Imperial College of Science Technology and Medicine, London, SW7 2AY, UK
- SO Organic Letters (2001), 3(20), 3165-3168 CODEN: ORLEF7; ISSN: 1523-7060
- PB American Chemical Society
- DT Journal
- LA English
- CC 28-6 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 25
- OS CASREACT 135:344414
- AB Regioselective 1.3-dipolar cycloaddns. of supported vinyl ethers R1C(:CH2)OCH2-polymer, prepared by the Tebbe olefination of R1CO2CH2-polymer, with Et cyanoformate N-oxide gave supported isoxazoline derivs. Release from the support under mild acidic conditions gave the isoxazoles Et 5-R1-isoxazole-3-carboxylates. Alternatively, further on-resin functionalization of the R1 substituent using Suzuki coupling reactions and release from the support under acidic conditions gave more structurally diverse isoxazoles.

solid phase synthesis isoxazole: dipolar cycloaddn supported vinyl ether: Suzuki coupling reaction solid phase synthesis isoxazole Cycloaddition reaction IT (1.3-dipolar, regioselective; regioselective 1,3-dipolar cycloaddns, of supported vinyl ethers with Et cyanoformate N-oxide) Suzuki coupling reaction IT (Suzuki coupling reactions in solid-phase synthesis of isoxazoles) IT Solid phase synthesis (regioselective 1.3-dipolar cycloaddns. of supported vinyl ethers with Et cyanoformate N-oxide) 371157-24-3P 371157-25-4P 371157-26-5P 371157-27-6P 371157-28-7P 371157-29-8P 371157-30-1P RL: SPN (Synthetic preparation); PREP (Preparation) (Suzuki coupling and regioselective 1.3-dipolar cycloaddns. of supported vinyl ethers with Et cyanoformate N-oxide) 1423-26-3, 3-Trifluoromethylphenylboronic acid 6165-69-1 13331-27-6. 3-Nitrophenylboronic acid 14047-29-1, 4-Carboxyphenylboronic acid 78887-39-5, 3-Acetamidophenylboronic acid 87199-17-5. 4-Formylphenylboronic acid 126747-14-6, 4-Cyanophenylboronic acid RL: RCT (Reactant); RACT (Reactant or reagent) (Suzuki coupling reactions of) 230647-85-5P 371157-19-6P 371157-20-9P 371157-21-0P 371157-22-1P IT 371157-23-2P RL: SPN (Synthetic preparation); PREP (Preparation) (Suzuki coupling reactions of supported vinyl ethers) 14337-43-0. Ethyl chloroximidoacetete 140455-42-1D, polymer supported 215457-53-7D, polymer supported 371157-31-2D, polymer supported 371157-33-4D, polymer supported 371157-34-5D, polymer supported 371157-36-7D. polymer supported 371157-35-6D, polymer supported 371157-37-8D, polymer supported RL: RCT (Reactant); RACT (Reactant or reagent) (regioselective 1,3-dipolar cycloaddns. of supported vinyl ethers with Et cyanoformate N-oxide) 33277-15-5P 90924-54-2P 371157-13-0P 371157-14-1P 371157-15-2P 371157-16-3P 371157-17-4P 371157-18-5P RL: SPN (Synthetic preparation); PREP (Preparation) (regioselective 1,3-dipolar cycloaddns. of supported vinyl ethers with Et cyanoformate N-oxide) THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 21 (1) Ball, C: Chem Commun 1998, P2019 HCAPLUS (2) Boa, A; J Chem Soc, Perkin Trans 1 1993, P1277 HCAPLUS (3) Boa, A; J Chem Soc, Perkin Trans 1 1994, P953 HCAPLUS (4) Caramella, P; Tetrahedron 1984, V40, P441 HCAPLUS (5) Comely. A: Angew Chem. Int Ed 2000, V40, P1021 (6) Franzen, R: J Comb Chem 2000, V2, P195 HCAPLUS (7) Gowravram, M: Tetrahedron Lett 1997, V38, P6973 (8) Guillier, F; Chem Rev 2000, V100, P2091 HCAPLUS (9) Haap, W; Tetrahedron 1998, V54, P3705 HCAPLUS (10) Leznoff, C: Can J Chem 1980, V58, P1144 (11) Marzinzik, A: Tetrahedron Lett 1996, V37, P1003 HCAPLUS (12) Miyaura, N; Chem Rev 1995, V95, P2457 HCAPLUS (13) Miyaura, N; Synth Commun 1981, V11, P513 HCAPLUS (14) Mukaiyama, T; J Am Chem Soc 1960, V82, P5339 HCAPLUS (15) Rowley, M; J Med Chem 1996, V39, P1943 HCAPLUS (16) Shankar. B: Tetrahedron Lett 1998, V39, P2447 HCAPLUS (17) Shen, D: Org Lett 2000, V2, P2789 HCAPLUS (18) Simoni. D: J Med Chem 1999, V42, P4961 HCAPLUS (19) Simoni, D: J Med Chem 2001, V44, P2308 HCAPLUS (20) Talley, J: J Med Chem 2000, V43, P775 HCAPLUS

(21) Torsell, K: Nitrile Oxides, Nitrones and Nitronates in Organic Synthesis

IT 371157-24-3P 371157-25-4P 371157-26-5P 371157-29-8P

RL: SPN (Synthetic preparation): PREP (Preparation) (Suzuki coupling and regioselective 1.3-dipolar cycloaddns. of supported vinyl ethers with Et cyanoformate N-oxide) 371157-24-3 HCAPLUS

CN 3-Isoxazolecarboxylic acid. 5-[3'-(acetylamino)[1,1'-biphenyl]-3-yl]-. ethyl ester (9CI) (CA INDEX NAME)

RN 371157-25-4 HCAPLUS
CN 3-Isoxazolecarboxylic acid. 5-(4'-carboxy[1,1'-biphenyl]-3-yl)-. 3-ethyl
 ester (9CI) (CA INDEX NAME)

RN 371157-26-5 HCAPLUS
CN 3-Isoxazolecarboxylic acid, 5-[3'.5'-bis(trifluoromethyl)[1.1'-biphenyl]-3yl]-, ethyl ester (9CI) (CA INDEX NAME)

RN 371157-29-8 HCAPLUS
CN 3-Isoxazolecarboxylic acid. 5-(4'-cyano[1.1'-biphenyl]-3-yl)-, ethyl ester
 (9CI) (CA INDEX NAME)

L17 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN AN 2001:581835 HCAPLUS

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135:152794
DN
    Entered STN: 10 Aug 2001
ΤI
    Preparation of substituted cyanoacetamide derivatives as herbicides
     Yamanaka, Hiroyuki: Kajita. Satoshi: Tanaka. Katsunori: Koguchi. Masami:
     Yamada, Shigeo: Takahashi, Akihiro
PΑ
     Nippon Soda Co., Ltd. Japan
    PCT Int. Appl., 54 pp.
S0
     CODEN: PIXXD2
DT
    Patent
    Japanese
LA
    C07C317-24; C07C317-32; A01N041-10; C07D261-08; C07D263-32; C07D277-26;
TC.
     C07D277-22; C07D271-06; C07D271-10; C07D231-12; C07D249-08; C07D257-04;
     C07D307-38: C07D333-24
     28-6 (Heterocyclic Compounds (More Than One Hetero Atom))
     Section cross-reference(s): 5, 25
FAN.CNT 1
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                         KIND
                               DATE
                                            APPLICATION NO.
                                                                   DATE
                                                                   20010130
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    WO 2001056979
                                20010809
                                            WO 2001-JP603
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PRAI JP 2000-27226
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                          Α
     JP 2000-304838
                          Α
                                20001004
CLASS
 PATENT NO.
                 CLASS PATENT FAMILY CLASSIFICATION CODES
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                                         C07C317-32IC
                                                          A01N041-10IC
                        C07D261-08IC
                                         C07D263-32IC
                                                          C07D277-26IC
                        C07D277-22IC
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                        C07D231-12IC
                                         C07D249-08IC
                                                          C07D257-04IC
                        C07D307-38IC
                                         C07D333-24
0S
    MARPAT 135:152794
GI
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$$\begin{array}{c|c}
R4 & X & 0 & R1 \\
N & & & & \\
N_5 & NC & & & \\
R5 & NC & & & \\
R3)_n & & & \\
R2 & & & & \\
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- AB The title compds. I [R1 and R2 are each hydrogen. nitro. cyano. halogeno. C1-6 alkyl. C1-6 alkylsulfonyl. or the like: R3 is nitro. cyano. halogeno. C1-6 alkyl. or the like: n is 0. 1 or 2: R4 and R5 are each hydrogen. C1-6 alkyl. C1-6 alkoxy. or the like. or alternatively they may be united to form an alkylene chain. a heterocyclic group. or the like: X is oxygen or sulfur: and Z is formyl. di(C1-6 alkoxy)methyl. Ph. a heterocyclic group. or the like] are prepared 3-(Azetidin-1-yl)-2-[2-methyl-3-(3-methylisoxazol-5-yl)-4-(methylsulfonyl)phenyl]-3-oxopropanenitrile at 250 g/ha gave 80% to 89% control of Abutilon avicennae.
- ST cyanoacetamide prepn herbicide: isoxazolmethylsulfonylphenyloxopropanenitr ile prepn herbicide

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Herbicides
        (preparation of substituted cyanoacetamide derivs. as herbicides)
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    RL: AGR (Agricultural use): BAC (Biological activity or effector, except
    adverse); BSU (Biological study, unclassified); SPN (Synthetic
    preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of substituted cyanoacetamide derivs. as herbicides)
    74-88-4, Methyl iodide, reactions 107-29-9, Acetaldoxime 128-09-6,
    N-Chlorosuccinimide 530-62-1 540-72-7. Sodium thiocyanate 557-18-6.
    Diethylmagnesium 630-08-0, Carbon monoxide, reactions 1313-82-2.
     Sodiumsulfide, reactions 6330-25-2 7391-40-4 7632-00-0, Sodium
     nitrite 7681-82-5, Sodium iodide, reactions 7726-95-6, Bromine.
                13965-03-2. Bis(triphenylphosphine)palladium dichloride
    reactions
    84385-64-8
                146561-43-5 196819-96-2 353237-64-6 353237-65-7
                  353237-67-9
     353237-66-8
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        (preparation of substituted cyanoacetamide derivs. as herbicides)
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                   345907-89-3P
     353237-62-4P
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     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of substituted cyanoacetamide derivs. as herbicides)
RE.CNT 9
              THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RF
(1) Abbott Laboratories; WO 9424095 A1 1994 HCAPLUS
(2) Ciba-Geigy Ag: JP 02202865 A HCAPLUS
(3) Ciba-Geigy Ag: CA 2004754 A HCAPLUS
(4) Ciba-Geigy Ag; HU 52038 A HCAPLUS
(5) Ciba-Geigy Ag: EP 372470 A2 1990 HCAPLUS
(6) Rohm And Hass Company: US 4781750 A HCAPLUS
(7) Rohm And Hass Company: JP 6284040 A
(8) Rohm And Hass Company: EP 213892 A2 1987 HCAPLUS
(9) Syntex U S A Inc: US 5034410 A 1991 HCAPLUS
    353236-73-4P
    RL: AGR (Agricultural use): BAC (Biological activity or effector, except
    adverse); BSU (Biological study, unclassified); SPN (Synthetic
    preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of substituted cyanoacetamide derivs. as herbicides)
RN
    353236-73-4 HCAPLUS
CN
    Benzenepropanamide, N-(4-chlorophenyl)-.alpha.-cyano-2-methyl-3-(3-methyl-
     5-isoxazolyl)-4-(methylsulfonyl)-.beta.-oxo- (9CI) (CA INDEX NAME)
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C1 Me Me Me Me
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L17 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
AN
    2001:507532 HCAPLUS
    135:107148
DN
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    Entered STN: 13 Jul 2001
    Preparation of N-cyanomethyl amides as cysteine protease inhibitors
    Oballa. Renata Marcella: Prasit. Petpiboon: Robichaud. Joel Stephane:
     Isabel, Elise; Mendonca, Rohan V.; Venkatraman, Shankar; Setti, Eduardo:
    Wang, Dan-Xiong
PA
    Merck Frosst Canada & Co., Can.; Axys Pharmaceuticals, Inc.
S0
    PCT Int. Appl., 157 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
IC
    ICM A61K031-40
        A61K031-42: A61K031-47: A61K031-50: A61K031-405: C07D209-04:
          C07D215-00; C07D217-00; C07D235-04; C07D265-30; C07D401-00;
          C07D405-00: C07D413-00
    25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
    Section cross-reference(s): 1, 27, 28, 63
FAN.CNT 1
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                        KIND
                               DATE
                                           APPLICATION NO.
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PΙ
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    WO 2001049288
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            HU, ID. IL. IN, IS. JP. KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU.
            LV. MA. MD. MG. MK. MN. MW. MX. MZ. NO. NZ. PL. PT. RO, RU. SD.
             SE. SG. SI. SK. SL. TJ. TM. TR. TT. TZ. UA. UG. US. UZ. VN. YU.
             ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES. FI, FR, GB, GR. IE. IT. LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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                         AΑ
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                         A1
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                               20030225
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        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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     JP 2003525874
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                                                                  20010105
PRAI US 2000-174978P
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    US 2000-256793P
                         Р
                               20001219
    WO 2001-US341
                               20010105
CLASS
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                CLASS PATENT FAMILY CLASSIFICATION CODES
 WO 2001049288
                       A61K031-40
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                        C07D209-04; C07D215-00; C07D217-00; C07D235-04;
                       C07D265-30; C07D401-00; C07D405-00; C07D413-00
 US 2002052378
                ECLA
                       C07C255/25: C07D215/12: C07D239/42B3: C07D263/22:
                        C07D277/36: C07D277/40: C07D277/42: C07D027/48:
                        C07D277/58; C07D277/68; C07D295/14A2; C07D319/18;
                       C07D333/34; C07D417/04+277B+207; C07D071/04+221B+209B:
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C07C255/41: C07D207/08A: C07D207/14: C07D209/16: C07D209/30: C07D211/34: C07D213/61 OS. MARPAT 135:107148 The title compds. R3X1CONHCR1R2CN [I; X1 = CR4R5, CR6R7, NR7 (wherein AB CR4R5 = (un)substituted cyclohexyl; R6 = H, alkyl; R7 = alkyl, (CH2)1-3 cyclopropyl): R1 = H. alkyl; R2 = H. (un)substituted alkyl; R3 = aryl. cycloalkyl, heterocycloalkyl, etc.] which showed cathepsin B. K. L. and S inhibitory activity (no data), were prepared Thus, reacting 2-(biphenyl-3-yl)-4-methylpentanoic acid (preparation given) with aminoacetonitrile in the presence of PyBOP and Et3N in DMF afforded I [X1 = CH(CH2CHMe2); R1, R2 = H; R3 = 3-biphenyl]. amide cyanomethyl prepn formulation cysteine protease cathepsin inhibitor ST 330474-41-4P 330474-42-5P 349669-22-3P 349669-23-4P 349669-24-5P 349669-25-6P 349669-26-7P 349669-27-8P 349669-28-9P 349669-29-0P 349669-31-4P 349669-32-5P 349669-34-7P 349669-30-3P 349669-33-6P 349669-37-0P 349669-39-2P 349669-35-8P 349669-36-9P 349669-38-1P 349669-40-5P 349669-41-6P 349669-43-8P 349669-45-0P 349669-47-2P 349669-49-4P 349669-51-8P 349669-53-0P 349669-54-1P 349669-56-3P 349669-57-4P 349669-61-0P 349669-58-5P 349669-59-6P 349669-60-9P 349669-62-1P 349669-63-2P 349669-64-3P 349669-65-4P 349669-66-5P 349669-68-7P 349669-71-2P 349669-67-6P 349669-69-8P 349669-70-1P 349669-72-3P 349669-73-4P 349669-74-5P 349669-75-6P 349669-76-7P 349669-80-3P 349669-78-9P 349669-82-5P 349669-83-6P 349669-84-7P 349669-85-8P 349669-86-9P 349669-87-0P 349669-88-1P 349669-92-7P 349669-89-2P 349669-90-5P 349669-91-6P 349669-93-8P 349669-94-9P 349669-95-0P 349669-96-1P 349669-97-2P 349669-98-3P 349669-99-4P 349670-00-4P 349670-01-5P 349670-02-6P 349670-03-7P 349670-04-8P 349670-07-1P 349670-08-2P 349670-05-9P 349670-06-0P 349670-09-3P 349670-10-6P 349670-11-7P 349670-12-8P 349670-13-9P 349670-14-0P 349670-15-1P 349670-16-2P 349670-17-3P 349670-18-4P 349670-19-5P 349670-20-8P 349670-21-9P 349670-22-0P 349670-23-1P 349670-24-2P 349670-25-3P 349670-26-4P 349670-27-5P 349670-28-6P 349670-29-7P 349670-30-0P 349670-31-1P 349670-32-2P 349670-33-3P 349670-34-4P 349670-35-5P 349670-36-6P 349670-37-7P 349670-38-8P 349670-40-2P 349670-41-3P 349670-43-5P 349670-39-9P 349670-42-4P 349670-45-7P 349670-44-6P 349670-46-8P 349670-47-9P 349670-48-0P 349670-49-1P 349670-50-4P 349670-51-5P 349670-52-6P 349670-53-7P 349670-54-8P 349670-55-9P 349670-56-0P 349670-57-1P 349670-58-2P 349670-63-9P 349670-59-3P 349670-60-6P 349670-62-8P 349670-61-7P 349670-64-0P 349670-65-1P 349670-66-2P 349670-67-3P 349670-68-4P 349670-69-5P 349670-70-8P 349670-71-9P 349670-72-0P 349670-73-1P 349670-74-2P 349670-75-3P 349670-76-4P 349670-77-5P 349670-78-6P 349670-81-1P 349670-80-0P 349670-82-2P 349670-83-3P 349670-79-7P 349670-84-4P 349670-85-5P 349670-86-6P 349670-87-7P 349670-88-8P 349670-89-9P 349670-90-2P 349670-91-3P 349670-92-4P 349670-93-5P 349670-94-6P 349670-95-7P 349670-96-8P 349670-97-9P 349670-98-0P 349671-02-9P 349671-00-7P 349671-01-8P 349670-99-1P 349671-03-0P 349671-04-1P 349671-05-2P 349671-06-3P 349671-07-4P 349671-08-5P 349671-10-9P 349671-11-0P 349671-12-1P 349671-09-6P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified): SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of N-cyanomethyl amides as protease cysteine inhibitors) 9047-22-7, cathepsin B 37353-41-6, cysteine protease 60616-82-2. cathepsin L 71965-46-3, cathepsin S 94716-09-3, cathepsin K RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study) (preparation of N-cyanomethyl amides as protease cysteine inhibitors) 64-04-0. Phenethylamine 70-11-1. 2-Bromo-1-phenylethanone 110-91-8. IT

(preparation of N-cyanomethyl amides as protease cysteine inhibitors)
64-04-0. Phenethylamine 70-11-1. 2-Bromo-1-phenylethanone 110-91-8.
Morpholine. reactions 701-97-3. 3-Cyclohexylpropanoic acid 1458-98-6.
3-Bromo-2-methylpropene 5292-43-3. tert-Butyl bromoacetate 7352-02-5.
Ethyl 2-cyano-4-methylpentanoate 17016-83-0 23948-77-8.
[1.1'-Biphenyl]-3-acetic acid 29805-59-2 68819-84-1 349671-24-5 349671-25-6 349671-26-7

RL: RCT (Reactant): RACT (Reactant or reagent)

(preparation of N-cyanomethyl amides as protease cysteine inhibitors) 190661-70-2P 215522-85-3P 349671-13-2P IT 349671-14-3P 349671-15-4P 349671-17-6P 349671-18-7P 349671-19-8P 349671-20-1P 349671-16-5P 349671-21-2P 349671-22-3P 349671-23-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of N-cyanomethyl amides as protease cysteine inhibitors)

349669-78-9P

RN

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of N-cyanomethyl amides as protease cysteine inhibitors) 349669-78-9 HCAPLUS

[1,1'-Biphenyl]-3-acetamide, N-(cyanomethyl)-4'-hydroxy-3'-(5-isoxazolyl)-CN .alpha.-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L17 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

2001:300693 HCAPLUS

DN 134:311235

Entered STN: 27 Apr 2001

Preparation of benzodiazepine derivatives as metabotropic glutamate receptor antagonists

IN Adam, Geo; Alanine, Alexander; Goetschi, Erwin; Mutel, Vincent; Woltering, Thomas Johannes

F. Hoffmann-La Roche Ag, Switz.

PCT Int. Appl., 142 pp.

CODEN: PIXXD2

DT Patent

LA English

ICM C07D243-00

28-21 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1

FAN. CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE -------------------WO 2001029012 PΙ A2 20010426 WO 2000-EP9554 20000929 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT. LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU. SD. SE, SG. SI. SK. SL. TJ. TM. TR. TT. TZ. UA. UG. UZ. VN. YU. ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW. MZ, SD, SL, SZ, TZ, UG, ZW. AT, BE, CH, CY. DE. DK. ES, FI. FR. GB. GR. IE. IT. LU. MC. NL. PT. SE. BF. BJ. CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG CA 2386980 AΑ 20010426 CA 2000-2386980 20000929 BR 2000014761 20020702 BR 2000-14761 20000929 Α EP 2000-971302 20000929 EP 1224175 A2 20020724 EP 1224175 В1 20040317

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CLASS
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 WO 2001029012
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                 ECLA
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                        C07D403/10+249+243; C07D403/10+249B+243;
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                        C07D417/06+277B+243; C07D417/10++277+243
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     MARPAT 134:311235
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$$R^{1-X}$$
 N
 R^{3}
 I

The title compds. [I: X is a single bond or an ethynediyl group: wherein. in case X is a single bond. R1 is hydrogen, halogen, nitro, lower alkyl. halo-lower alkyl, alkoxycarbonyl, lower cycloalkyl optionally substituted with oxygen, (un)substituted benzoyl or Ph. styrenyl, phenylethyl. naphthyl, biphenyl, benzofuranyl, or (un)substituted 5 or 6 membered heterocyclic ring; wherein in case X is an ethynediyl group. R1 is hydrogen, lower alkyl, optionally substituted with hydroxy, halo-lower alkyl, (un)substituted lower cycloalkyl or lower cycloalkenyl, lower alkenyl, (un)substituted Ph or 5 or 6 membered heterocyclic ring, or benzofuranyl; R3 is (un)substituted Ph, pyridinyl, thiophenyl, thiazolyl, or a 5-membered aromatic heterocycle, with the proviso that, if X is a single bond and R3 is pyridinyl. R1 is not hydrogen, or methyl] and their pharmaceutically acceptable acid addition salts are prepared These compds. can be used for treating or preventing acute and/or chronic neurol. disorders such as psychosis, schizophrenia, Alzheimer's disease, cognitive disorders, and memory deficits. Thus, [2-amino-4-(4fluorophenylethynyl)phenyl]-carbamic acid tert-Bu ester (preparation given) and 6-(3-imidazol-1-ylphenyl)-2,2-dimethyl-[1,3]dioxin-4-one (preparation given) were refluxed in toluene to give [4-(4-fluorophenylethynyl)-2-[3-(3imidazol-1-ylphenyl)-3-oxopropionylamino]phenyl]carbamic acid tert-Bu ester which was treated with CF3CO2H in CH2C12 to give 8-(4-Fluorophenylethynyl)-4-(3-imidazol-1-ylphenyl)-1.3dihydrobenzo[b](1.4)diazepin-2-one (II). II showed the antagonism against group II mGlu receptor with Ki of 0.004 .mu.M in an assay using [3H]-LY354740 binding on mGlu2 transfected CHO cell membranes. benzodiazepine prepn metabotropic glutamate receptor antagonist;

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benzodiazepinone prepn antipsychotic: schizophrenia treatment
benzodiazepinone prepn; imidazolylphenyldihydrobenzodiazepinone prepn
treatment cognitive disorder; memory deficit benzodiazepinone prepn
Mental disorder
   (cognitive: preparation of benzodiazepine derivs. as metabotropic glutamate
   receptor antagonists for treating or preventing acute and/or chronic
   neurol. disorders)
Cognition
   (disorder: preparation of benzodiazepine derivs. as metabotropic glutamate
   receptor antagonists for treating or preventing acute and/or chronic
   neurol. disorders)
Alzheimer's disease
Antipsychotics
Schizophrenia
   (preparation of benzodiazepine derivs. as metabotropic glutamate receptor
   antagonists for treating or preventing acute and/or chronic neurol.
Memory, biological
   (retention defect; preparation of benzodiazepine derivs. as metabotropic
   glutamate receptor antagonists for treating or preventing acute and/or
   chronic neurol. disorders)
4968-94-9P
            13422-80-5P 19936-11-9P, N-(4-Cyclopropylphenyl)acetamide
53503-61-0P
             139911-29-8P, 4-Fluoro-2-methylphenylboronic acid
              335254-68-7P, 4-Iodo-2-nitrophenyl isocyanate
335254-69-8P. (4-Iodo-2-nitrophenyl)carbamic acid tert-butyl ester
335254-70-1P. (4-Isopropyl-2-nitrophenyl)carbamic acid tert-butyl ester
335254-71-2P, (4-Cyclopropyl-2-nitrophenyl)carbamic acid tert-butyl ester
335254-73-4P, (4'-Methoxy-3-nitrobiphenyl-4-yl)carbamic acid tert-butyl
        335254-74-5P
                      335254-75-6P 335254-76-7P 335254-77-8P
ester
335254-78-9P
               335254-79-0P
                              335254-80-3P
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335254-83-6P
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4-Fluoro-2-methoxymethoxyphenylboronic acid
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                                             335254-93-8P
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335254-90-5P
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335255-22-6P
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                                             335255-25-9P.
(2-Amino-4-iodophenyl)carbamic acid tert-butyl ester 335255-26-0P
335255-27-1P
               335255-28-2P
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335255-71-5P
(2-Amino-4-isopropylphenyl)carbamic acid tert-butyl ester
                                                            335255-76-0P.
(2-Amino-4-cyclopropylphenyl)carbamic acid tert-butyl ester
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335255-81-7P
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Methyl 3-(1H-imidazol-1-yl)benzoate 335255-86-2P 335255-87-3P
                              335255-90-8P, Methyl 3-(4-methylimidazol-1-
335255-88-4P
               335255-89-5P
yl)benzoate
              335255-91-9P
                             335255-93-1P
                                            335255-94-2P, Ethyl
3-(2,4-dimethylimidazol-1-yl)benzoate 335255-96-4P
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335255-98-6P
               335255-99-7P
                              335256-01-4P
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335256-04-7P, Ethyl 3-(3-methylisoxazol-5-yl)benzoate
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335256-06-9P
               335256-07-0P
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5-Cyano-2-fluorobenzoyl chloride
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335256-29-6P

335256-34-3P

335256-25-2P

335256-30-9P

335256-35-4P

335256-26-3P

335256-31-0P

335256-37-6P

335256-28-5P

335256-33-2P

335256-40-1P

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335256-45-6P

335256-44-5P

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335256-42-3P

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(Reactant or reagent)
   (intermediate; preparation of benzodiazepine derivs. as metabotropic
   glutamate receptor antagonists for treating or preventing acute and/or
   chronic neurol. disorders)
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(Reactant or reagent)
   (intermediate; preparation of benzodiazepine derivs. as metabotropic
   glutamate receptor antagonists for treating or preventing acute and/or
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335259-18-2P

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 335259-31-9P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified): SPN (Synthetic preparation): THU (Therapeutic use):
 BIOL (Biological study): PREP (Preparation): USES (Uses)
    (preparation of benzodiazepine derivs. as metabotropic glutamate receptor
    antagonists for treating or preventing acute and/or chronic neurol.
    disorders)
70-23-5, Ethyl bromopyruvate 74-88-4, Methyl iodide, reactions
 74-89-5, Methylamine, reactions 78-27-3. 1-Ethynyl-1-cyclohexanol 78-95-5, Chloroacetone 80-73-9, 1.3-Dimethyl-2-imidazolidinone 88-74-4, 2-Nitroaniline 92-66-0, 4-Bromobiphenyl 98-03-3,
 Thiophene-2-carboxaldehyde 98-09-9. Benzenesulfonyl chloride 98-80-6.
 Phenylboronic acid 99-05-8, 3-Aminobenzoic acid 106-95-6, Allyl
 bromide, reactions 107-29-9. Acetaldoxime 107-30-2. Chloromethylmethyl
 ether 108-22-5. Isopropenyl acetate 109-01-3. N-Methylpiperazine
 109-04-6. 2-Bromopyridine 110-91-8. Morpholine. reactions 115-19-5.
 2-Methyl-3-butyn-2-ol 121-90-4, 3-Nitrobenzoyl chloride 122-51-0, Triethyl orthoformate 124-63-0, Methanesulfonyl chloride 141-43-5.
 2-Aminoethanol, reactions 288-32-4. Imidazole, reactions 348-52-7.
 2-Fluoroiodobenzene 352-34-1, 1-Fluoro-4-iodobenzene 452-63-1.
 2-Bromo-5-fluorotoluene 503-38-8, Diphosgene 529-28-2, 2-Iodoanisole
 536-74-3, Phenylacetylene 540-88-5, tert-Butyl acetate 582-33-2. Ethyl
 3-aminobenzoate 615-37-2, 2-Iodotoluene 615-41-8, 1-Chloro-2-
 iodobenzene 618-46-2, 3-Chlorobenzoyl chloride 623-00-7.
 4-Bromobenzonitrile 624-31-7, 4-Iodotoluene 625-95-6, 3-Iodotoluene
 626-55-1, 3-Bromopyridine 637-87-6, 1-Chloro-4-iodobenzene 638-07-3,
 Ethyl 4-chloro-3-oxobutanoate 645-36-3, Aminoacetaldehyde diethyl acetal
 768-35-4. 3-Fluorophenylboronic acid 768-60-5. 4-Methoxyphenylacetylene
 813-19-4. Hexabutyldistannane 873-31-4. 2-Chlorophenylacetylene
 873-73-4, 4-Chlorophenylacetylene 1066-54-2, Trimethylsilylacetylene
 1076-38-6, 4-Hydroxycoumarin 1120-87-2, 4-Bromopyridine 1122-54-9,
 4-Acetylpyridine 1711-05-3, 3-Methoxybenzoyl chloride 1711-10-0,
 3-Iodobenzoyl chloride 1711-11-1, 3-Cyanobenzoyl chloride 1765-93-1.
 4-Fluorophenylboronic acid 1993-03-9, 2-Fluorophenylboronic acid
 2131-63-7, 3-Isothiocyanatobenzoic acid 2208-07-3, Ethyl acetimidate
 hydrochloride 2251-65-2, 3-Trifluoromethylbenzoyl chloride 2265-93-2,
 2,4-Difluoro-1-iodobenzene 3034-53-5, 2-Bromothiazole 3282-30-2,
 Pivaloyl chloride 3385-94-2. Hexamethyldisilthiane 3437-95-4.
 2-Iodothiophene 4298-52-6. 2-Ethynylthiophene 5271-67-0.
 Thiophene-2-carbonyl chloride 5398-36-7, Ethyl 2-amino-4-
 thiazolecarboxylate 5720-07-0. 4-Methoxyphenylboronic acid 6148-64-7.
 Ethyl malonate potassium salt 6165-69-1. Thiophene-3-boronic acid
 7803-49-8. Hydroxylamine, reactions 7803-57-8. Hydrazine hydrate
 10365-98-7. 3-Methoxyphenylboronic acid 13331-23-2, Furan-2-boronic acid
 13531-48-1. Methyl 3-cyanobenzoate 13922-41-3, 1-Naphthylboronic acid
 14171-36-9. Magnesium methyl carbonate 18457-04-0.
 Bis(trimethylsilyl)malonate 20555-91-3, 3,4-Dichloroiodobenzene
 22059-22-9, N-Hydroxyacetamidine 37595-74-7 39986-42-0, 3-Azidobenzoyl
 chloride 53090-46-3 53547-61-8. Vinyl triflate 55552-70-0.
 Furan-3-boronic acid 57385-16-7, 4-Ethynyltetrahydropyran-4-ol
 57390-38-2, 2-Aminopropional dehyde dimethyl acetal 58481-14-4.
 2-Cyano-isonicotinic acid ethyl ester 63139-21-9, 4-Ethylphenylboronic
 acid 63649-64-9. 4-Isopropyl-2-nitroaniline 67808-35-9 69931-93-7.
 3-0xo-3-(thiophen-2-yl)propionic acid 75486-33-8 78495-63-3. 2-Fluoro-6-methoxyphenylboronic acid 79099-07-3. N-tert-Butoxycarbonyl-4-
 piperidone 86270-03-3, 3-Trifluoromethoxybenzoyl chloride 86427-02-3.
 3-Chlorothiophene-2-carbonyl chloride 93066-93-4. Methyl 3-azidobenzoate
 98437-24-2 103962-05-6, 1-Iodo-4-(trifluoromethoxy)benzene
 108035-47-8. 3-(1H-Imidazol-1-yl)benzoic acid
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 2.3-Difluorophenylboronic acid 139301-27-2.
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335259-14-8P

335259-15-9P

335259-16-0P

Difluorophenylboronic acid 162269-78-5 167626-27-9 168422-44-4 177984-28-0 178742-95-5. Ethyl 3-ethynylbenzoate 188881-22-3 193353-34-3. 2.5-Difluorophenylboronic acid 204196-80-5. 3-(Tetrazol-1-yl)benzoic acid 256420-32-3. Ethyl 2-(imidazol-1-yl)thiazole-4-carboxylate 295349-62-1 335256-00-3 335256-16-1. 2-Isothiocyanato-1.1-dimethoxypropane 335256-20-7 335256-22-9 335256-23-0. 3-Cyanothiophene-2-carbonyl chloride 335256-36-5. 3-(1H-Imidazol-1-yl)benzoyl chloride hydrochloride 335256-53-6 335259-29-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant; preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT 20691-72-9P. 4-Iodo-2-nitroaniline 138647-49-1P 335254-72-3P.
4-Cyclopropyl-2-nitrophenylamine 335255-80-6P 335255-92-0P. Ethyl
3-(2-methylimidazol-1-yl)benzoate 335255-95-3P 335257-95-9P
RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)

(reactant: preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT 335257-32-4P 335257-42-6P

RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)

(intermediate; preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

RN 335257-32-4 HCAPLUS

CN Carbamic acid. [4'-fluoro-3-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3-dioxopropyl]amino][1.1'-biphenyl]-4-yl]-. 1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 335257-42-6 HCAPLUS

CN Carbamic acid. [2'-fluoro-3-[[3-[3-(3-methyl-5-isoxazolyl)phenyl]-1.3dioxopropyl]amino][1.1'-biphenyl]-4-yl]-. 1.1-dimethylethyl ester (9CI)
(CA INDEX NAME)

L17 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:300692 HCAPLUS

DN 134:311234

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Entered STN: 27 Apr 2001
     Preparation of benzodiazepine derivatives as metabotropic glutamate
     receptor antagonists
ΙN
     Adam. Geo: Alanine. Alexander: Goetschi. Erwin: Mutel. Vincent: Woltering.
     Thomas Johannes
     F. Hoffmann-La Roche Ag, Switz.
PA
     PCT Int. Appl., 140 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
IC
     ICM C07D243-00
     28-21 (Heterocyclic Compounds (More Than One Hetero Atom))
     Section cross-reference(s): 1
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                                             APPLICATION NO.
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PRAI EP 1999-120520
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CLASS
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                 CLASS PATENT FAMILY CLASSIFICATION CODES
WO 2001029011
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                        C07D243-00
                        C07D243/12
US 6407094
                 ECLA
0S
    MARPAT 134:311234
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$$R1-X$$
 $R2$
 $R3$ I

The title compds. [I; X is a single bond or an ethynediyl group; wherein. in case X is a single bond, R1 is halogen or (un)substituted phenyl; in case X is an ethynediyl group. R1 is (un)substituted phenyl; R2 is

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halogen, hydroxy, lower alkyl, lower haloalkyl, lower alkoxy,
hydroxymethyl, hydroxyethoxy, lower alkoxy(ethoxy)n (n = 1 to 4), lower
alkoxymethyl, cyanomethoxy, morpholin-4-yl, thiomorpholin-4-yl.
1-oxothiomorpholin-4-yl. 1.1-dioxothiomorpholin-4-yl. 4-oxopiperidin-1-yl.
4-alkoxypiperidin-1-yl. 4-hydroxypiperidine-1-yl. 4-hydroxyethoxypiperidin-
1-yl. 4-lower alkylpiperazine-1-yl, alkoxycarbonyl. 2-
dialkylaminoethylthio, N.N-bis(lower alkyl)amino-lower alkyl.
carbamoylmethyl, alkylsulfonyl, etc.; R3 is (un)substituted 5 or 6
membered aryl or heteroaryl. etc.] and their pharmaceutically acceptable
addition salts are prepared These compds. can be used for treating or
preventing acute and/or chronic neurol. disorders such as psychosis.
schizophrenia. Alzheimer's disease, cognitive disorders and memory
deficits. Thus, a mixture of (5-amino-2-tert-butoxy-2',5'-difluorobiphenyl-
4-yl)carbamic acid tert-Bu ester and 3-(2,2-dimethyl-6-oxo-6H-[1,3]dioxin-
4-yl)benzonitrile in toluene was refluxed to give [2-tert-butoxy-5-[[3-(3-
cyanophenyl)-3-oxo-propionyl]amino]-2',5'-difluorobiphenyl-4-yl]carbamic
acid tert-Bu ester which was treated with CF3CO2H in CH2C12 to give
3-[7-(2.5-Difluorophenyl)-8-hydroxy-4-oxo-4.5-dihydro-3H-
benzo[b](1,4)diazepin-2-yl]benzonitrile (II). II in vitro inhibited the
binding of [3H]-LY354740 binding on mGlu2 receptor transfected CHO cell
membranes with Ki of 0.006 .mu.M.
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ST benzodiazepine prepn metabotropic glutamate receptor antagonist; psychosis treatment benzodiazepine; schizophrenia treatment benzodiazepine; Alzheimer disease treatment benzodiazepine; cognitive disorder treatment benzodiazepine; memory deficit treatment benzodiazepine 2134

IT Mental disorder

(cognitive: preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT Cognition

(disorder: preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT Glutamate antagonists

(metabotropic glutamate receptor; preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT Alzheimer's disease

Antipsychotics

Schizophrenia

(preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT Memory, biological

(retention defect; preparation of benzodiazepine derivs. as metabotropic glutamate receptor antagonists for treating or preventing acute and/or chronic neurol. disorders)

IT 4968-94-9P 5398-36-7P. Ethyl 2-amino-4-thiazolecarboxylate 6968-22-5P. 3-Amino-4-nitrobenzoic acid 13422-80-5P 53503-61-0P 69931-93-7P 178975-04-7P 335254-68-7P, 4-Iodo-2-nitrophenyl isocyanate 335254-69-8P. (4-Iodo-2-nitrophenyl)carbamic acid tert-butyl ester 335255-09-9P 335255-80-6P 335255-81-7P 335255-83-9P 335255-84-0P 335255-88-4P 335255-90-8P 335255-86-2P 335255-87-3P 335255-89-5P 335255-91-9P 335255-92-0P 335255-93-1P 335255-94-2P 335255-95-3P 335255-97-5P 335255-98-6P 335255-99-7P 335255-96-4P 335256-01-4P 335256-02-5P 335256-03-6P 335256-05-8P 335256-06-9P 335256-07-0P 335256-08-1P 335256-12-7P, 5-Cyano-2-fluorobenzoyl chloride 335256-13-8P 335256-14-9P 335256-15-0P 335256-17-2P 335256-18-3P 335256-21-8P 335256-24-1P 335256-19-4P 335256-20-7P 335256-22-9P 335256-29-6P 335256-25-2P 335256-26-3P 335256-27-4P 335256-28-5P 335256-35-4P 335256-30-9P 335256-31-0P 335256-32-1P 335256-33-2P 335256-37-6P 335256-39-8P 335256-40-1P 335256-41-2P 335256-42-3P 335256-43-4P 335256-44-5P 335349-56-9P 335349-57-0P.

5-Chloro-4-iodo-2-nitrophenylamine 335349-58-1P, 4-Iodo-5-methyl-2-

```
nitrophenylamine 335349-59-2P, 5-Amino-2-iodo-4-nitrobenzoic acid methyl
        335349-60-5P 335349-61-6P 335349-62-7P 335349-63-8P
335349-64-9P
               335349-65-0P
                             335349-66-1P, 4-Iodo-5-methoxy-2-
nitrophenylamine 335349-67-2P 335349-68-3P. 4-Iodo-5-(2-methoxyethoxy)-
2-nitrophenylamine 335349-69-4P
                                    335349-70-7P 335349-71-8P
335349-72-9P 335349-73-0P
                             335349-74-1P. (5-Amino-2-iodo-4-
nitrophenyl)acetonitrile 335349-75-2P 335349-76-3P 335349-77-4P
               335349-79-6P
                              335349-80-9P
335349-78-5P
                                             335349-81-0P
                                                             335349-82-1P
335349-83-2P
               335349-84-3P, [5-[(2-Hydroxyethyl)methylamino]-4-iodo-2-
nitrophenyl]-carbamic acid tert-butyl ester
                                               335349-85-4P
                                                              335349-86-5P
335349-87-6P
               335349-88-7P
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335349-97-8P
               335349-98-9P
                              335349-99-0P
                                              335350-00-0P
                                                             335350-01-1P.
(2-Chloro-5-nitrobiphenyl-4-yl)carbamic acid tert-butyl ester
335350-02-2P, (2-Methyl-5-nitrobiphenyl-4-yl)carbamic acid tert-butyl
                                     335350-05-5P
ester
        335350-03-3P
                       335350-04-4P
                                                    335350-06-6P
335350-07-7P
               335350-08-8P
                              335350-09-9P. (5-Cyanomethoxy-4-iodo-2-
                                              335350-10-2P
                                                             335350-11-3P
nitrophenyl)carbamic acid tert-butyl ester
335350-12-4P
               335350-13-5P
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335351-29-6P
               335351-30-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
   (intermediate; preparation of benzodiazepine derivs. as metabotropic
   glutamate receptor antagonists for treating or preventing acute and/or
   chronic neurol. disorders)
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                                                             335351-41-2P
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335352-07-3P.
              (5-Hydroxy-2-nitrophenyl)carbamic acid tert-butyl ester
335352-09-5P. (5-Hydroxy-4-iodo-2-nitrophenyl)carbamic acid tert-butyl
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IT

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(intermediate; preparation of benzodiazepine derivs. as metabotropic
        glutamate receptor antagonists for treating or preventing acute and/or
        chronic neurol. disorders)
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                                  335352-21-1P 335352-31-3P
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     335352-58-4P
                   335352-63-1P
     RL: BAC (Biological activity or effector, except adverse): BSU (Biological
     study, unclassified): RCT (Reactant): SPN (Synthetic preparation): THU
     (Therapeutic use): BIOL (Biological study): PREP (Preparation): RACT
     (Reactant or reagent); USES (Uses)
        (preparation of benzodiazepine derivs. as metabotropic glutamate receptor
        antagonists for treating or preventing acute and/or chronic neurol.
        disorders)
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    335352-95-9P
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                                  335353-02-1P
                                                 335353-04-3P
                                                                335353-05-4P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
    BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of benzodiazepine derivs. as metabotropic glutamate receptor
       antagonists for treating or preventing acute and/or chronic neurol.
       disorders)
ΙT
    335353-03-2
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of benzodiazepine derivs. as metabotropic glutamate receptor
       antagonists for treating or preventing acute and/or chronic neurol.
       disorders)
    67-56-1. Methanol, reactions 74-88-4, Methyl iodide, reactions
    75-64-9, tert-Butylamine, reactions 77-76-9, 2,2-Dimethoxypropane
    79-22-1, Methyl chloroformate 79-37-8, Oxalyl chloride 98-80-6,
    Phenylboronic acid 99-05-8, 3-Aminobenzoic acid 100-79-8,
    1.2-Isopropylideneglycerol 105-13-5, 4-Methoxybenzyl alcohol 105-56-6.
    Ethyl cyanoacetate 107-18-6, Allyl alcohol, reactions 107-29-9.
    Acetaldoxime 107-30-2. Chloromethyl methyl ether 108-22-5. Isopropenyl
    acetate 108-59-8. Dimethyl malonate 109-01-3. 1-Methylpiperazine
    109-83-1. 2-Methylaminoethanol 109-86-4, 2-Methoxyethanol 109-96-6.
    3-Pyrroline 110-87-2, 3.4-Dihydro-2H-pyran 110-91-8, Morpholine.
    reactions 121-90-4, 3-Nitrobenzoyl chloride 122-51-0. Triethyl
    orthoformate 123-75-1, Pyrrolidine, reactions 123-90-0. Thiomorpholine
    124-63-0. Methanesulfonyl chloride 141-43-5. Ethanolamine, reactions
    177-11-7, 1.4-Dioxa-8-azaspiro[4.5]decane 288-32-4. Imidazole, reactions
    503-38-8. Diphosgene 530-62-1. 1.1'-Carbonyldiimidazole 536-74-3.
    Phenylacetylene 540-88-5, tert-Butyl acetate 578-46-1,
    5-Methyl-2-nitroaniline 582-33-2. Ethyl 3-aminobenzoate
    Bromoacetonitrile 618-46-2. 3-Chlorobenzoyl chloride 619-14-7.
```

3-Hydroxy-4-nitrobenzoic acid 645-36-3. Aminoacetaldehyde diethyl acetal

766-98-3, 4-Fluorophenylacetylene 813-19-4, Hexabutyldistannane

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

Sackey 10/771926

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1066-54-2. Trimethylsilylacetylene 1122-54-9. 4-Acetylpyridine
1635-61-6. 5-Chloro-2-nitroaniline 1711-05-3. 3-Methoxybenzoyl chloride
1711-10-0. 3-Iodobenzoyl chloride 1711-11-1. 3-Cyanobenzoyl chloride
1765-93-1. 4-Fluorophenylboronic acid 1993-03-9. 2-Fluorophenylboronic
acid 2131-63-7. 3-Isothiocyanatobenzoic acid 2208-07-3. Ethyl
acetimidate hydrochloride 2251-65-2. 3-Trifluoromethylbenzoyl chloride
2365-48-2, Methyl thioglycolate 3282-30-2, Pivaloyl chloride
4045-24-3, 4-Methoxypiperidine 5271-67-0, Thiophene-2-carbonyl chloride
5292-43-3, tert-Butyl bromoacetate 5382-16-1, 4-Hydroxypiperidine
6148-64-7. Ethyl malonate potassium salt 7580-85-0. 2-tert-Butoxyethanol
7704-34-9. Sulfur, reactions 7803-57-8. Hydrazine hydrate 13242-44-9.
2-Dimethylaminoethanethiol hydrochloride 13531-48-1, Methyl
3-cyanobenzoate 14171-36-9. Magnesium methyl carbonate 17739-45-6.
2-(2-Bromoethoxy)tetrahydro-2H-pyran 18457-04-0.
Bis(trimethylsilyl)malonate 20691-72-9, 4-Iodo-2-nitroaniline
23783-42-8. Tetra(ethylene glycol) monomethyl ether 31938-11-1.
O-Tritylhydroxylamine 36805-97-7, N.N-Dimethylformamide di-tert-butyl
 acetal 40256-14-2, 4-(2-Hydroxyethoxy)piperidine 53547-61-8, Vinyl
 triflate 57390-38-2, 2-Aminopropionaldehyde dimethyl acetal
 58481-14-4, 2-Cyanoisonicotinic acid ethyl ester 67808-35-9
 86270-03-3, 3-Trifluoromethoxybenzoyl chloride 86427-02-3.
 3-Chlorothiophene-2-carbonyl chloride 93066-93-4. Methyl 3-azidobenzoate
99512-09-1, 3-Amino-4-nitrobenzoic acid methyl ester 104706-47-0.
 (R)-3-Hydroxypyrrolidine hydrochloride 108035-47-8, 3-(1H-Imidazol-1-
yl)benzoic acid 139911-29-8, 4-Fluoro-2-methylphenylboronic acid
 167626-27-9 168422-44-4 178742-95-5. Ethyl 3-ethynylbenzoate
 193353-34-3. 2.5-Difluorophenylboronic acid 204196-80-5 256420-32-3
 295349-62-1, 2-Chloroisonicotinic acid tert-butyl ester 335255-82-8
 335256-00-3 335256-16-1, 2-Isothiocyanato-1,1-dimethoxypropane
 335256-23-0. 3-Cyanothiophene-2-carbonyl chloride 335256-36-5.
 3-(1H-Imidazol-1-yl)benzoyl chloride hydrochloride 335257-58-4
 335352-08-4. (5-Allyloxy-2-nitrophenyl)carbamic acid tert-butyl ester
 RL: RCT (Reactant): RACT (Reactant or reagent)
    (reactant: preparation of benzodiazepine derivs. as metabotropic glutamate
    receptor antagonists for treating or preventing acute and/or chronic
   neurol. disorders)
335255-85-1P. Methyl 3-(1H-imidazol-1-yl)benzoate 335256-04-7P. Ethyl
 3-(3-methylisoxazol-5-yl)benzoate 335350-53-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
    (reactant: preparation of benzodiazepine derivs. as metabotropic glutamate
    receptor antagonists for treating or preventing acute and/or chronic
   neurol. disorders)
335352-03-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
    (intermediate: preparation of benzodiazepine derivs. as metabotropic
    glutamate receptor antagonists for treating or preventing acute and/or
   chronic neurol. disorders)
335352-03-9 HCAPLUS
Carbamic acid. [2'-fluoro-2-[(4-methoxyphenyl)methoxy]-5-[[3-[3-(3-methyl-
 5-isoxazolyl)phenyl]-1,3-dioxopropyl]amino][1,1'-biphenyl]-4-yl]-.
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1.1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN

L17 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:409103 HCAPLUS

DN 121:9103

ED Entered STN: 09 Jul 1994

TI Reactions with 2-methyl-8-phenylbenzopyran-4-one and its derivatives

AU Soliman, A. Y.; Mahmoud, M. R.; Madkour, Hassan M. F.

CS Chem. Dep., Fac. Educ., El-Fayoum, Egypt

SO Revue Roumaine de Chimie (1993), 38(9), 1117-25

CODEN: RRCHAX: ISSN: 0035-3930

DT Journal

LA English

CC 27-14 (Heterocyclic Compounds (One Hetero Atom))

GΙ

- AB 2-Methyl-8-phenylbenzopyran-4-one (I) was prepared by reaction of 2-hydroxybiphenyl with Et acetoacetate in the presence of concentrated sulfuric acid. The reactivity of I and other chromone derivs, with different nucleophilic reagents was investigated. The IR, 1H NMR and mass spectra of the products are discussed.
- ST benzopyranone methylphenyl prepn reaction: isoxazole hydroxyaryl; pyrazole hydroxyaryl: benzopyranol deriv: benzopyranthione deriv

IT Ring closure and formation

(of biphenylol with Et acetoacetate)

IT 104-92-7. p-Bromoanisole 108-85-0. Bromocyclohexane 108-86-1.

Bromobenzene, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(Grignard reaction of, with methylphenylbenzopyranone)

IT 90-43-7, 2-Biphenylol

RL: RCT (Reactant): RACT (Reactant or reagent)

(cyclization reaction of, with Et acetoacetate)

IT 141-97-9, Ethyl acetoacetate

RL: RCT (Reactant): RACT (Reactant or reagent)

(cyclization reaction of, with biphenylol)

IT 155375-21-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation and hydrolysis of)

IT 155375-17-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

```
(Reactant or reagent)
       (preparation and reaction with hydrazines)
    155374-96-2P 155375-11-4P 155375-18-1P
    RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT
    (Reactant or reagent)
       (preparation and reactions of)
    155374-97-3P 155374-98-4P
                                 155374-99-5P 155375-00-1P
                                                               155375-05-6P
    155375-01-2P
                   155375-02-3P
                                 155375-03-4P
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                   155375-07-8P
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                                 155375-14-7P
                                                155375-15-8P
                                                               155375-16-9P
    155375-12-5P
                   155375-13-6P
    155375-19-2P
                  155375-20-5P
    RL: SPN (Synthetic preparation); PREP (Preparation)
       (preparation of)
    108-31-6. Maleic anhydride, reactions
    RL: RCT (Reactant): RACT (Reactant or reagent)
       (reaction of, with benzopyranone derivative)
    57-56-7. Semicarbazide 60-09-3. p-Aminoazobenzene
                                                         88-74-4.
    2-Nitroaniline 90-02-8. Salicylaldehyde, reactions 100-16-3.
    (p-Nitrophenyl)hydrazine 100-46-9. Benzylamine. reactions 100-63-0.
    Phenylhydrazine 104-55-2, Cinnamaldehyde 134-32-7, 1-Naphthylamine
    135-02-4, o-Anisaldehyde 302-01-2, Hydrazine, reactions 504-29-0.
    2-Aminopyridine 552-89-6, o-Nitrobenzaldehyde 587-04-2.
    m-Chlorobenzaldehyde 1314-80-3, Diphosphorus pentasulfide 5470-11-1.
    Hydroxylamine hydrochloride
    RL: RCT (Reactant): RACT (Reactant or reagent)
       (reaction of, with methylphenylbenzopyranone)
ΙT
   155375-00-1P
    RL: SPN (Synthetic preparation); PREP (Preparation)
       (preparation of)
    155375-00-1 HCAPLUS
RN
    [1.1'-Biphenyl]-2-ol, 3-(3-methyl-5-isoxazolyl)- (9CI) (CA INDEX NAME)
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L17 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
    1991:6228 HCAPLUS
AN
DN
    114:6228
    Entered STN: 12 Jan 1991
    Chromones and xanthone derivatives
    Mahmoud, M. R.; Soliman, A. Y.; Bakeer, H. M.
     Fac. Sci., Ain Shams Univ., Cairo, Egypt
CS
     Phosphorus, Sulfur and Silicon and the Related Elements (1990), 53(1-4),
     135-43
     CODEN: PSSLEC; ISSN: 1042-6507
DT
    Journal
    English
LA
CC
     27-14 (Heterocyclic Compounds (One Hetero Atom))
     CASREACT 114:6228
0S
GI
```

- AB Reaction of chromone I (R = Me. X = 0) with R1CHO (R1 = Ph. 4-Me2NC6H4. PhCH:CH) gave I (R = CH:CHR1. X = 0) Diels-Alder reactions of the latter with maleic anhydride gave xanthones II (R1 as above). Various reactions of I (R = Me. X = 0. S) and II (R1 = CH:CHPh) with R2NHNH2 (R2 = H. Ph), primary aromatic amines and Grignard reagents are reported.
- ST chromone deriv reaction; xanthone deriv; styrylchromone Diels Alder maleic anhydride
- IT 108-31-6. Maleic anhydride, reactions
 - RL: RCT (Reactant); RACT (Reactant or reagent)

(Diels-Alder reactions of, with styrylchromones)

- IT 92-69-3, 4-Hydroxybiphenyl
 - RL: RCT (Reactant); RACT (Reactant or reagent) (cyclocondensation of, with Et acetoacetate)
- IT 141-97-9. Ethyl acetoacetate
 - RL: RCT (Reactant): RACT (Reactant or reagent)

(cyclocondensation of, with hydroxybiphenyl, chromone derivative from)

- IT 130788-73-7P 130788-74-8P 130788-75-9P
- RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT
 (Reactant or reagent)

(preparation and Diels-Alder reaction of, with maleic anhydride)

- IT 58555-03-6P 130788-72-6P 130788-78-2P
 - RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reactions of)

IT 130788-76-0P 130788-77-1P 130788-79-3P 130788-80-6P 130788-81-7P 130788-82-8P 130788-83-9P 130788-84-0P 130788-85-1P 130788-86-2P 130788-87-3P 130788-88-4P 130788-89-5P 130788-90-8P

130/00-0/-3P 130/00-00-4P 130/00-09-5P 130/00-90-0P

130788-91-9P 130788-92-0P 130788-93-1P 130788-94-2P 130788-95-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

IT 100-63-0. Phenylhydrazine 106-47-8. p-Chloroaniline, reactions 134-32-7. .alpha.-Naphthylamine 917-64-6. Methylmagnesium iodide RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with chromone and xanthone derivs.)

- IT 100-10-7, p-(Dimethylamino)benzaldehyde 100-52-7, Benzaldehyde, reactions 104-55-2, Cinnamaldehyde
 - RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with methylchromone derivs.)

- IT 130788-87-3P
 - RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

- RN 130788-87-3 HCAPLUS
- CN [1.1'-Biphenyl]-4-ol, 3-(3-methyl-5-isoxazolyl)- (9CI) (CA INDEX NAME)

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L17 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
AN
     1982:162685 HCAPLUS
DN
     96:162685
     Entered STN: 12 May 1984
ED
ΤI
     Isoxazolyl(aminopropoxy)benzenes
     Shionogi and Co., Ltd., Japan
PA
     Jpn. Kokai Tokkyo Koho, 8 pp.
S0
     CODEN: JKXXAF
DT
     Patent
LA
     Japanese
IC
     C07D261-08
ICA
     A61K031-42
     28-6 (Heterocyclic Compounds (More Than One Hetero Atom))
     Section cross-reference(s): 1
FAN.CNT 1
     PATENT NO.
                        KIND
                                           APPLICATION NO.
                                                                  DATE
                         ____
                                           19800721
ΡĪ
     JP 57024375
                         A2
                               19820208
                                           JP 1980-100325
PRAI JP 1980-100325
                               19800721
                         Α
CLASS
 PATENT NO.
                CLASS PATENT FAMILY CLASSIFICATION CODES
                       JP: 57024375
                IC
                       C07D261-08
                ICA
                       A61K031-42
0S
     CASREACT 96:162685
GI
     OCH2CH(OH)CH2NHR
     I [R = alkyl, substituted phenylalkyl, (cyano)phenoxyalkyl; R1 =
     substituted isoxazolyl; R2 = H. halo, alkyl, alkanoyl, alkanoylamino.
     cycloalkylureido, H2NSO2] were prepared Thus, 0.2 g 2-isoxazol-3-yl-4-
     acetamido-1-(2,3-epoxypropoxy)benzene, prepared from 2-isoxazol-3-yl-4-
     acetamidophenol and epibromohydrin, reacted with 1 mL Me2CHNH2 in MeOH at
     100.degree. for 1 h to give 0.18 g 2-isoxazol-3-yl-4-acetamido-1-[2-
     hydroxy-3-(isopropylamino)propoxy]benzene. Data for the
     .beta.-sympatholytic activity of I were tabulated.
     beta sympatholytic isoxazolylaminopropoxybenzene; amination
     epoxypropoxybenzene alkylamine
IT
    Amination
        (of (epoxypropoxy)benzene derivs.)
IT
     Sympatholytics
        (.beta.-, (aminopropoxy)isoxazolylbenzenes)
IT
     75-31-0. reactions
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (amination by, of (epoxypropoxy)benzene derivative)
IT
     81461-35-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and amination with isopropylamine)
                                              81460-84-6P
                                                            81460-86-8P
IT
     81460-81-3P
                  81460-82-4P
                                81460-83-5P
                                                            81460-91-5P
     81460-87-9P
                  81460-88-0P
                                81460-89-1P
                                              81460-90-4P
     81460-93-7P
                  81460-95-9P
                                81460-96-0P
                                              81460-97-1P
                                                            81460-98-2P
     81461-00-9P
                  81461-01-0P
                                81461-03-2P
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     81461-06-5P
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                  81461-14-5P
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                                              81461-26-9P
                                                            81461-27-0P
                                81461-30-5P
                                                           81461-32-7P
     81461-28-1P
                  81461-29-2P
                                             81461-31-6P
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81461-33-8P 81461-34-9P

RL: SPN (Synthetic preparation): PREP (Preparation) (preparation and .beta.-sympatholytic activity of)

3132-64-7 ΙT

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of. with acetamidoisoxazolylphenol)

IT 81461-36-1

RL: RCT (Reactant): RACT (Reactant or reagent) (reaction of, with epibromohydrin)

81461-34-9P IT

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and .beta.-sympatholytic activity of)

RN

81461-34-9 HCAPLUS 2-Propanol, 1-[[2-(3.4-dimethoxyphenyl)ethyl]amino]-3-[3-(3-methyl-5isoxazolyl)phenoxy]-, monohydrochloride (9CI) (CA INDEX NAME)

=> b home

FILE 'HOME' ENTERED AT 08:44:02 ON 11 MAR 2005